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Vital Statistics of Massachusetts

Massachusetts Department of Public Health
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The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
Registry of Vital Records and Statistics
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Dorchester, MA 02125-3105

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LIEUTENANT GOVERNOR

TIMOTHY R. MURPHY
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PAUL J. COTE, JR.
COMMISSIONER

June, 2006

To the Honorable Clerks of the
Senate and House of Representatives:

We have the honor to submit as required by Chapter 111, Section 2 of the General Laws, the one hundred fifty-seventh annual report on statistics of births, deaths, marriages and divorces in Massachusetts for calendar year 1998. The information will also be available to the public via the Department of Public Health website at http://www.mass.gov/dph.

Since 1964, the ANNUAL REPORT OF VITAL STATISTICS has been published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

Stanley E. Nyberg

Stanley E. Nyberg, Ph.D.
Registrar

ANNUAL REPORT
VITAL STATISTICS OF MASSACHUSETTS
PUBLIC DOCUMENT #1
1998

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH

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JUNE 2006

ACKNOWLEDGEMENTS

This publication of the 1998 ANNUAL REPORT OF VITAL STATISTICS is the result of the combined efforts of all data providers, including the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel. We gratefully acknowledge the assistance provided by all data providers, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the 1998 ANNUAL REPORT OF VITAL STATISTICS include:

> Isabel Caceres, Bruce Cohen, Malena Hood, and James West, Center for Health Information, Statistics, Research, and Evaluation who provided technical assistance and data, including the previously published:
>
> Advance Data: Births 1998: Figures B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11 and D-3; as well as, Tables B-1, B-2a, B-2b, B-3a, B-3b, B-4, B-5a, B-5b, B-8 B-9, B-10, B-11, B-12, B-13, B-13a, B-14a, B-14b, B-14c, D-1, D-2, D-3, and D-4.
>
> Advance Data: Deaths 1998: Figures C-1, C-2, C-3, and C-4; as well as, tables C-1, C-2, C-3, C-3b, C-4, C-5, C-5b, C-6, C-7, C-8, C-9, C-10, C-11, C-12, C14a, C-14b, and C-14c.
>
> Division of Data Processing: data file management and vital events series printouts;
>
> Karin Barrett, Assistant Registrar, Paul Budrow, Vital Statistics Data Coordinator and Pauline McNulty: coordination of the hospital query program for birth certificate data, specialized data programming, and assistance in developing specialized table production; Jane Purtill, Director, Statistics Unit: supervision of data collection, coding and editing, with technical assistance from Maureen McKean (Statistics Unit supervisor), Robert Coffin (Chief Nosologist), and Ann-Marie Neault (Nosologist).

The joint efforts of all the staff of the Registry of Vital Records and Statistics are necessary to produce the data contained in this publication. Special acknowledgement is made to the following Registry supervisors:

> Howard Wong, Director of Systems and Development, who is responsible for all the computer-based systems in the Registry office;
>
> Pedro Fidalgo, Operations Unit Supervisor, who is responsible for all printing and mailing of forms;
>
> June Deloney, Registration Unit Supervisor, who is responsible for coordination with cities and towns to produce the data in a timely fashion.

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INTRODUCTION

The ANNUAL REPORT OF VITAL STATISTICS (Public Document No. 1) has been published continuously since 1842. This is the 35th edition produced by the Department of Public Health. This report, required under the provisions of Chapter 111, section 2, of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 1998. Approximately 1,500 copies of the report are distributed to federal, state, and local governmental agencies, private and public health planners and researchers, students, and members of the general public. The report provides its users with an overview of the health status of the Massachusetts population.

Vital statistics data may be tabulated either in terms of resident data or occurrence data. Resident data includes all events that occur to residents of the Commonwealth, wherever the events occur. Occurrence data includes all those events that occur within the Commonwealth, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth, death, and fetal death records among the fifty states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events that occur in states other than where the individual resides. This exchange allows each of the states and provinces to track the births and deaths of their residents. The majority of the data presented in this report for births and deaths is based on resident data. Marriage and divorce data, however, only reflect events that occurred within the Commonwealth.

REGISTRATION

The first government-operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries with a vital registration system such as England, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1842, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and town is sent to the Secretary of State. The first year of collection was designated for 1841. The collection of data and the production of the ANNUAL REPORT OF VITAL STATISTICS has continued since then. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open records. For open birth and death records, there is a triple registration process in Massachusetts. The event is first recorded in the city or town where the event occurred. The clerk of that community is then required to forward a certified copy of the record to both the community where the person resided at the time of the event and to the State Registry. Certified copies of the records may be issued from local or state records. If the record is a restricted record, such as those of out-of-wedlock births, the registration occurs only in the community where the event occurred and in the state office.

In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives a confidential copy of the birth record directly from the hospital or birthing center where the birth occurred. This copy includes confidential medical information in addition to the legal information. It is this copy of the record, which is processed to produce the statistical information on births contained in this report.

Since 1986, the State Registry has developed a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called Electronic Birth Certificate (EBC). Almost 98 percent of all birth records are now received through this method. EBC has contributed to reducing processing time at both the hospital and the State Registry, while the system's built-in edits increase the quality of the data.

The process for creating death certificates is the most complex of all vital records. Complete and accurate death records are dependent upon the following individuals: 1.) Certifier, who not only initiates the death registration process but also determines the cause of death as well as the place, time, and date of death; 2.) Funeral Director, who plays the role of facilitator in the death registration process and adds the personal data concerning the decedent, which are supplied by an informant; 3.) Burial Agent, who both issues the permit that allows the chosen disposition to take place and serves as the initial acceptor of the death certificate for official registration; and, 4.) City or Town Clerk, who records the death certificate, issues certified copies of same and forwards a copy of the death record to the Registry of Vital Records and Statistics and other communities as required by law.

The Registry of Vital Records and Statistics receives directly from hospitals or physicians the fetal death reports for fetuses of either twenty or more weeks gestation or weighing at least 350 grams. There are no local filings of fetal death reports.

Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.

STATISTICAL PROCESSING AND TABULATING

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, errors and inconsistencies are queried and corrected. A computerized hospital query program is part of the EBC program. The Registry also has a data quality assurance program that includes on-site instruction for clerks and hospital personnel who have reporting difficulties, and training for all groups involved in the data collection process.

Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report and in special studies, and for program monitoring and surveillance.

Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Ninth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as to educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

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VITAL EVENTS

SECTION A

VITAL EVENTS

HIGHLIGHTS

BIRTHS

- In 1998, there were 81,406 births to Massachusetts residents.
- Births increased by 0.1% from 1997 to 1998.
- The 1998 Massachusetts birth rate per 1,000 residents was 13.1, an increase of 1.6% from the birth rate of 12.9 in 1997.
- Massachusetts' 1998 birth rate of 13.1 per 1,000 residents was below the 1998 US rate of 14.6.
- The most births occurred in July (9.0%--7,315 births); the fewest births occurred in February (7.5%--6,120 births).

DEATHS

- In 1998, 55,204 Massachusetts residents died.
- The number of resident deaths increased by 1.0% from 1997 to 1998.
- The Massachusetts crude death rate increased from 876.4 deaths per 100,000 residents in 1997 to 886.4 in 1998. The 1998 US crude death rate of 864.7 deaths per 100,000 residents was slightly lower than the 1997 US crude death rate of 864.9. The 1998 age-adjusted death rate in Massachusetts (433.1 per 100,000 residents) was lower than the US age-adjusted death rate (471.7).
- The most deaths in 1998 occurred in January (9.9%--5,445); the fewest occurred in September (7.3%--4,006).

FETAL DEATHS

- There were 448 reportable fetal deaths to Massachusetts residents in 1998.
- The number of reportable fetal deaths decreased by 9 from 1997 to 1998, resulting in a fetal death rate of 5.5 per 1,000 live births.

INFANT DEATHS

- In 1998, 414 infant deaths (less than 1 year of age) occurred to Massachusetts residents.
- The 1998 Massachusetts infant mortality rate of 5.1 deaths per 1,000 live births was a slight decrease from the 1997 infant mortality rate of 5.3 deaths per 1,000 live births.
- The black non-Hispanic infant mortality rate decreased from 11.7 in 1997 to 10.6 in 1998.
- The Massachusetts 1998 infant mortality rate of 5.2 per 1,000 live births was 28% below the US rate of 7.2.

MARRIAGES

- In 1998, there were 38,722 marriages in Massachusetts.
- The number of marriages in Massachusetts decreased by 6.8% from 1997 to 1998.
- The 1998 Massachusetts rate of 6.2 marriages per 1,000 population was below the US rate of 8.3.
- The most marriages occurred in October (13.4%--5,200); the fewest occurred in January (3.3%--1,293).

DIVORCES

- In 1998, 16,010 divorces were granted in Massachusetts.
- Divorces in Massachusetts increased by 0.4% from 1997 to 1998.
- The 1998 Massachusetts divorce rate of 2.6 divorces per 1,000 population was below the US rate of 3.5.
- The largest number of divorces were finalized in December (1,458--9.1%), and the fewest in February (1,147--7.2%).

NATURAL INCREASE

- The rate of natural increase in the Massachusetts resident population increased from 4.1 in 1997 to 4.3 in 1998.
- The 1998 US natural increase rate of 6.0 remains above that of Massachusetts.

The Vital Events section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town and county. More detailed information is contained in the sections on the individual events.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

FETAL DEATH

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or weighing at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

INFANT DEATH

Death of a child whose age is less than one year.

MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produces the official population estimates and projections for the Commonwealth.

NATURAL INCREASE

The difference between the number of resident live births and the number of resident deaths.

NEONATAL DEATH

Death of a child whose age is less than 28 days.

OCCURRENCE

Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place will be one of 351 cities or towns.

RESIDENCE

The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred in Massachusetts.

CRUDE RATES OF VITAL EVENTS:

BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1{,}000$
FETAL MORTALITY RATE	$\frac{\text{Number of Resident Fetal Deaths}}{\text{Resident Live Births + Resident Fetal Deaths}} \times 1{,}000$
INFANT MORTALITY RATE	$\frac{\text{No. of Resident Deaths <1 Year}}{\text{Resident Live Births}} \times 1{,}000$
NEONATAL MORTALITY RATE	$\frac{\text{No. of Resident Deaths <28 Days}}{\text{Resident Live Births}} \times 1{,}000$
DEATH RATE	$\frac{\text{No. of Resident Deaths}}{\text{Total Resident Population}} \times 100{,}000$
MARRIAGE RATE	$\frac{\text{No. of Occurrence Marriages}}{\text{Total Resident Population}} \times 1{,}000$
DIVORCE RATE	$\frac{\text{No. of Occurrence Divorces}}{\text{Total Resident Population}} \times 1{,}000$

Table A-1
SELECTED FACTS IN VITAL STATISTICS
MASSACHUSETTS: 1998

BIRTH

Age Range of Mothers: 12-50

Age Range of Fathers: 14-86

Sets of Twins: 1,557

Sets of Triplets: 94

Sets of Quadruplets: 2

Most Births Occurred on: July 8, 1998 (255 births)

Fewest Births Occurred on: November 29, 1998 (108 births)

Highest # of Births at: Brigham and Women's Hospital (9,395)

Lowest # of Births at: Cambridge Birth Center (35 births)

Twenty Most Popular Names for Boys

Boys' Names	*Number*	*Boys' Names*	*Number*
Michael	1,140	Kyle	581
Matthew	1,119	Tyler	573
Nicholas	993	Joshua	562
John	730	Zachary	524
Ryan	693	William	518
Christopher	688	Benjamin	517
Jacob	675	Alexander	515
Daniel	664	James	506
Joseph	646	Thomas	460
Andrew	641	David	448

Twenty Most Popular Names for Girls

Girls' Names	*Number*	*Girls' Names*	*Number*
Emily	791	Nicole	378
Samantha	616	Amanda	349
Sarah	584	Abigail	347
Hannah	509	Rachel	337
Julia	488	Madison	333
Olivia	476	Victoria	313
Emma	419	Taylor	311
Ashley	413	Katherine	309
Elizabeth	388	Alexis	284
Jessica	386	Lauren	280

DEATH

Male Decedents 100 Years and Older: 79

Female Decedents 100 Years and Older: 493

Most Deaths Occurred on: February 12, 1998 (230)

Fewest Deaths Occurred on: August 19, 1998 (98)

Month Most Suicides Occurred: August (54)

Month Most Homicides Occurred September (16)

Month Most Motor Vehicle Deaths Occurred July (55)

MARRIAGE

Ages of Brides: 14-88 years (average: 31.1)
Age of first time brides: 14-81 years (average: 28.0)

Ages of Grooms: 16-92 years (average: 33.4)
Age of first time grooms: 16-87 (average: 29.6)

Most Popular Month for Marriages: October (5,200)

Least Popular Month for Marriages: January (1,293)

Most Marriages Occurred On: September 12, 1998 (766)

Fewest Marriages Occurred On: May 6, 1998 (3)

Greatest Age Difference When Bride Older than Groom: 29 years

Greatest Age Difference When Groom Older than Bride: 53 years

DIVORCE

Length of Marriages Involved in Divorces: < 1 Year to 62 Years of Marriage

Most Common Length of Marriage Prior to Divorce: 5 years

Month Most Divorces Granted: December (1,458)

Month Fewest Divorces Granted: February (1,147)

Figure A-1

1998 Massachusetts Daily Vital Events

Each day in 1998, Massachusetts residents had approximately:

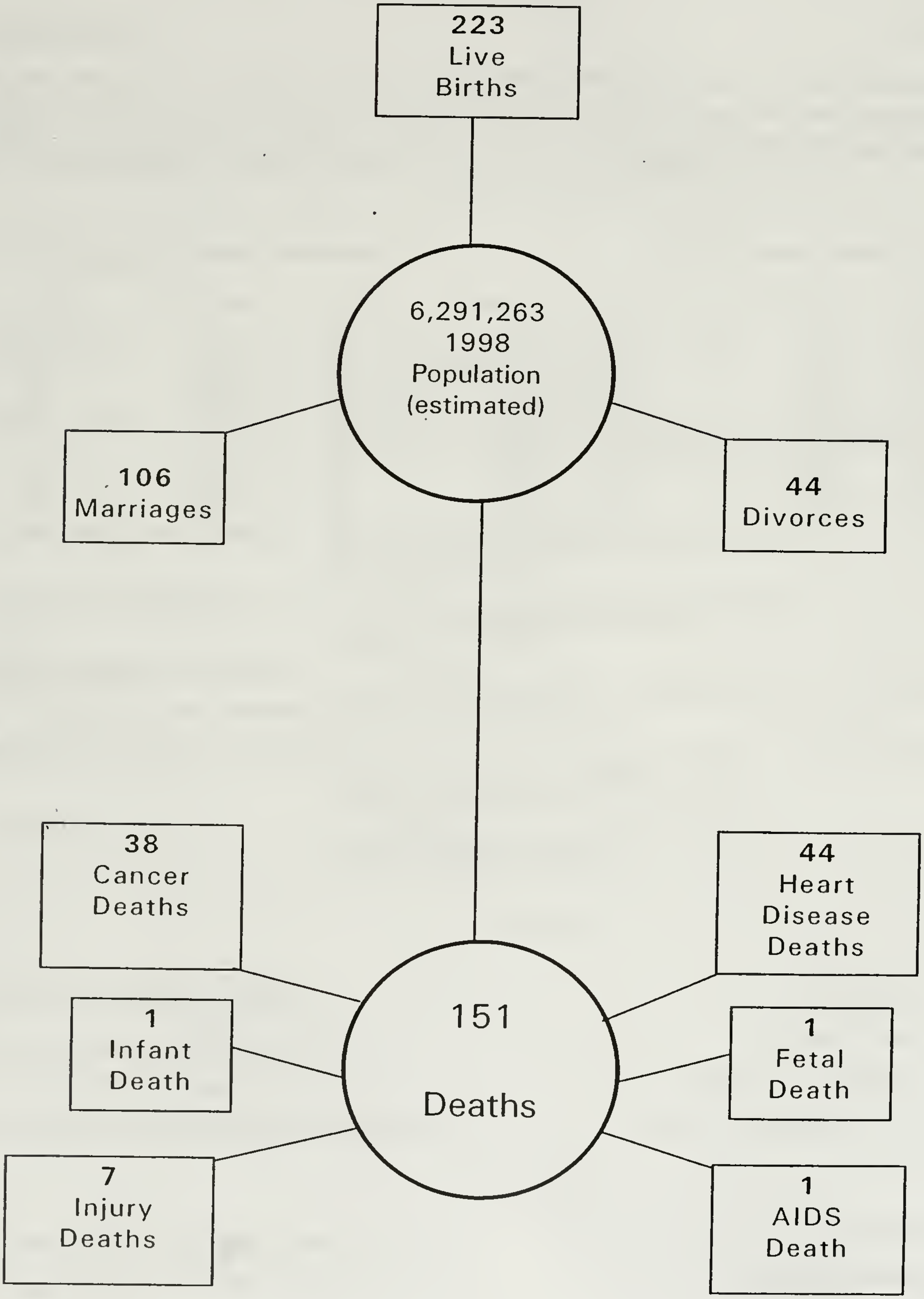


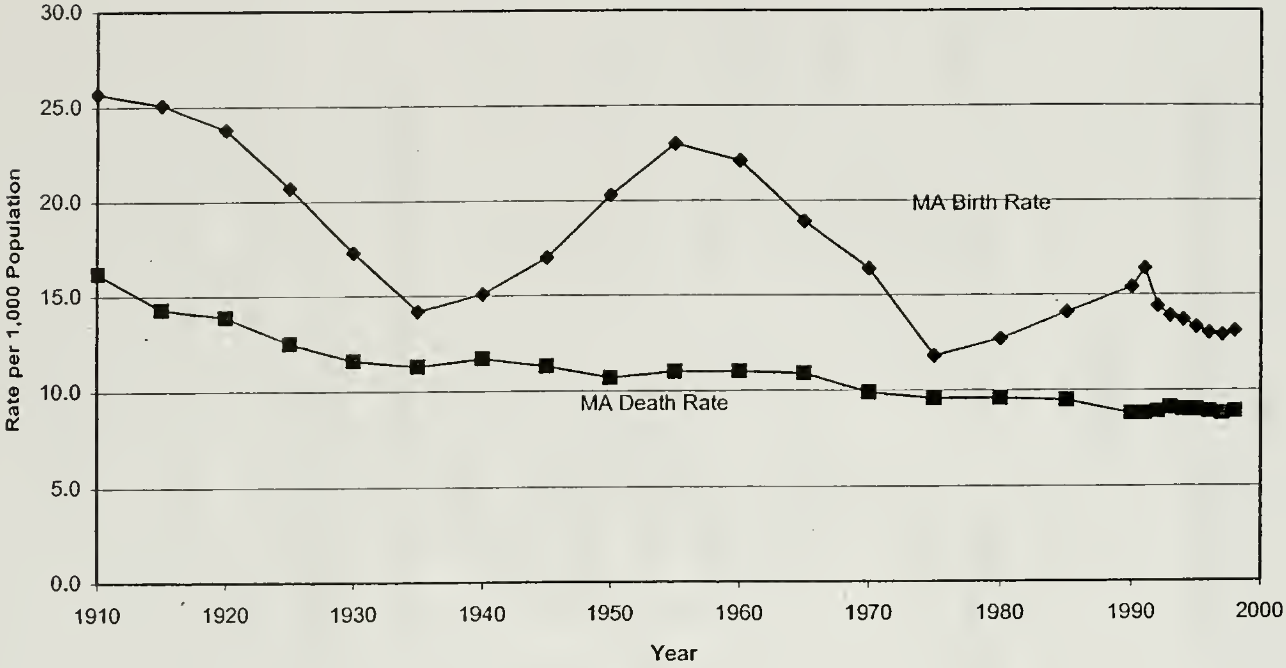
Table A-2. Number and Crude Rates of Vital Events, Massachusetts and United States: 1997-1998

	Massachusetts					United States				
	1998		1997		% of Rate	1998		1997		% of Rate
Vital Event	Number	Rate*	Number	Rate*	Change	Number	Rate*	Number	Rate*	Change
Births	81,406	13.1	80,321	12.9	1.6	3,941,553	14.6	3,880,894	14.5	0.7
Fetal Deaths	448	5.5	439	5.4	1.9	NA[1]	NA	NA[1]	NA	-
Total Deaths	55,204	8.8	54,634	8.8	0	2,337,256	8.7	2,314,245	8.6	1.2
Infant Deaths	414	5.1	425	5.3	-3.8	28,371	7.2	28,045	7.2	0
Neonatal Deaths	315	3.9	323	4.0	-2.5	18,918	4.8	18,524	4.8	0.0
Marriages	38,722	6.2	41,528	6.7	-7.5	2,241,032	8.3	2,384,000	8.9	-6.7
Divorces	16,010	2.5	15,942	2.6	3.8	932,772	3.5	1,163,000	4.3	-18.7

*NOTES: Neonatal and infant deaths are included in total deaths; neonatal deaths are included in infant deaths; fetal deaths are excluded from deaths and births.
Figures for marriages and divorces reflect occurrence, not residence.
The rates for live births, marriages and divorces are per 1,000 population; rates for total deaths are per 1,000 population.
Rates for infants and neonatal deaths are per 1,000 live births. Rates for fetal deaths are per 1,000 live births and fetal deaths.
Population estimates provided by MassChip.

[1] Not available.

Figure A-2. Births, Deaths, and Natural Increase in Massachusetts and the United States, 1910-1998



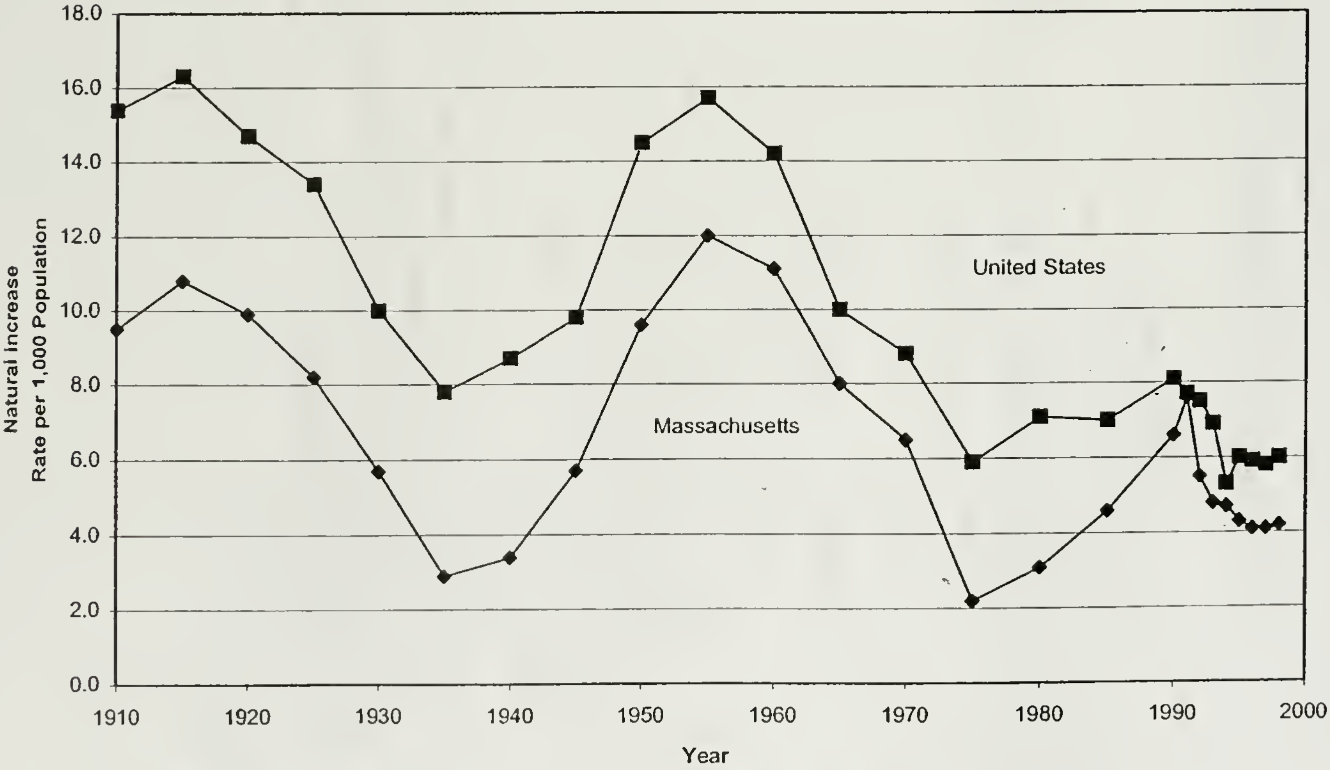


Table A-3. Massachusetts Resident Births and Deaths With Resultant Natural Increase

Massachusetts: 1900-1998

Year	Births	Deaths	Natural Increase	Rate/1000 Residents
1900	73,386	51,156	22,230	7.9
1905	75,022	50,486	24,536	8.2
1910	86,539	54,407	32,132	9.5
1915	93,155	53,131	40,024	10.8
1920	91,859	53,632	38,227	9.9
1925	86,014	51,890	34,124	8.2
1930	73,690	49,503	24,187	5.7
1935	62,416	49,634	12,782	2.9
1940	65,369	50,698	14,671	3.4
1945	76,455	50,763	25,692	5.7
1950	95,619	50,359	45,260	9.6
1955	109,610	53,386	56,224	11.6
1960	114,018	56,560	57,458	11.2
1965	100,262	58,853	41,409	7.8
1970	93,582	56,944	36,638	6.4
1975	68,070	53,708	14,362	2.5
1980	72,591	54,934	17,657	3.1
1981	73,930	52,813	21,117	3.7
1982	75,749	52,867	22,882	4.0
1983	76,031	54,150	21,881	3.8
1984	78,197	55,189	23,008	4.0
1985	81,781	55,597	26,184	4.5
1986	82,168	55,860	26,308	4.5
1987	84,345	55,562	28,783	4.9
1988	88,047	56,407	31,640	5.4
1989	91,314	53,748	37,566	6.4
1990	92,461	53,008	39,453	6.6
1991	88,176	53,010	35,166	5.8
1992	87,202	53,804	33,398	5.5
1993	84,627	55,557	29,070	4.8
1994	83,758	54,914	28,844	4.7
1995	81,562	55,296	26,266	4.3
1996	80,164	55,187	24,977	4.0
1997	80,321	54,634	25,687	4.1
1998	81,406	55,204	26,202	4.2

Table A-4. Vital Events by Month, Massachusetts Residents: 1998

		Births	Fetal Deaths[1]	Deaths	Infant Deaths[2]	Neonatal Deaths[2]	Marriages	Divorces
Totals		81,406	448	55,204	414	315	38,722	16,010
January	#	6,502	41	5,445	37	25	1,293	1,433
	Rank	10	3	1	5	7	12	2
February	#	6,120	37	5,441	25	17	1,664	1,147
	Rank	12	5	2	12	12	10	12
March	#	6,948	33	4,917	39	26	1,519	1,418
	Rank	5	8	3	3	6	11	4
April	#	6,835	48	4,321	40	29	2,163	1,374
	Rank	7	2	8	2	4	8	5
May	#	7,272	36	4,364	34	24	4,425	1,167
	Rank	2	7	7	7	8	5	11
June	#	6,930	25	4,087	38	30	4,796	1,349
	Rank	6	12	11	4	3	4	7
July	#	7,315	30	4,214	29	27	3,515	1,426
	Rank	1	11	10	11	5	6	3
August	#	7,053	33	4,270	37	33	5,047	1,335
	Rank	3	8	9	5	2	2	9
September	#	7,013	56	4,006	31	22	4,959	1,343
	Rank	4	1	12	8	11	3	8
October	#	6,750	37	4,516	30	24	5,200	1,370
	Rank	8	5	6	10	8	1	6
November	#	6,157	39	4,769	31	23	2,411	1,190
	Rank	11	4	5	8	10	7	10
December	#	6,510	33	4,858	43	35	1,730	1,458
	Rank	9	8	4	1	1	9	1

[1] Fetal deaths are not included in Births or Deaths. [2] Infant deaths and neonatal deaths are included in total resident deaths; neonatal deaths are included in infant deaths.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
ABINGTON	15,531	0	208	74	120	1	1	0	79	88
ACTON	19,980	0	245	74	92	1	1	0	78	153
ACUSHNET	10,970	0	105	23	73	2	1	0	36	32
ADAMS	8,778	0	83	23	129	1	1	0	51	-46
AGAWAM	29,457	0	320	282	291	1	1	0	210	29
ALFORD	410	0	2	0	0	0	0	0	4	2
AMESBURY	15,997	0	225	86	145	1	1	0	66	80
AMHERST	40,827	2	163	58	108	1	1	0	134	55
ANDOVER	31,857	0	352	136	219	0	0	0	242	133
ARLINGTON	43,066	4	531	285	476	2	2	1,294	186	55
ASHBURNHAM	6,280	0	56	5	26	0	0	344	37	30
ASHBY	2,683	0	30	9	21	0	0	424	12	9
ASHFIELD	1,863	1	13	2	15	0	0	331	7	-2
ASHLAND	14,081	1	223	15	71	1	0	0	62	152
ATHOL	11,269	1	126	148	125	0	0	0	58	1
ATTLEBORO	40,412	809	592	464	358	0	0	0	201	234
AUBURN	15,581	1	147	110	161	0	0	0	103	-14
AVON	4,401	0	47	12	43	0	0	0	35	4
AYER	5,210	2	115	181	69	0	0	0	27	46
BARNSTABLE	46,461	1,035	511	961	481	4	1	158	487	30
BARRE	5,122	0	59	6	33	0	0	228	58	26
BECKET	1,701	1	16	3	10	0	0	496	3	6
BEDFORD	11,898	1	232	174	158	1	1	83	96	74
BELCHERTOWN	12,642	1	157	19	79	2	2	0	41	78
BELLINGHAM	15,743	0	226	24	98	2	2	0	79	128
BELMONT	25,787	0	286	86	223	1	1	0	146	63
BERKLEY	5,680	0	95	2	20	3	3	0	18	75
BERLIN	2,338	0	27	9	24	0	0	0	18	3
BERNARDSTON	2,052	0	11	11	26	0	0	0	12	-15
BEVERLY	40,476	2,644	472	686	437	1	1	1,241	257	35
BILLERICA	38,304	0	553	103	240	0	0	186	162	313
BLACKSTONE	9,159	0	117	12	52	1	1	1,489	21	65

(1) MISER POPULATION ESTIMATES FOR MASSACHUSETTS CITIES AND TOWNS: JULY 1, 1998. POPULATION PROGRAM, MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH, UNIVERSITY OF MASSACHUSETTS AT AMHERST.

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
BLANDFORD	1,172	0	11	0	6	0	0	117	6	5
BOLTON	4,274	0	64	5	14	0	0	0	20	50
BOSTON	563,876	21,908	7,883	8,013	4,501	46	34	0	3,538	3,382
BOURNE	16,857	0	253	98	181	0	0	0	116	72
BOXBOROUGH	4,645	0	68	3	10	1	0	0	26	58
BOXFORD	8,763	0	85	11	37	0	0	0	11	48
BOYLSTON	3,739	0	56	10	40	0	0	0	65	16
BRAINTREE	34,278	0	386	402	421	1	0	224	188	-35
BREWSTER	10,044	0	77	176	142	0	0	48	182	-65
BRIDGEWATER	25,680	0	295	52	127	2	2	140	117	168
BRIMFIELD	3,325	1	38	5	26	0	0	42	22	12
BROCKTON	91,008	2,313	1,453	1,209	869	14	13	0	428	584
BROOKFIELD	3,168	1	26	15	32	0	0	0	11	-6
BROOKLINE	60,639	3	655	229	436	0	0	0	348	219
BUCKLAND	1,899	0	17	3	15	0	0	0	13	2
BURLINGTON	25,208	1	333	483	140	2	1	0	121	193
CAMBRIDGE	96,292	1,920	1,034	895	579	2	1	0	829	455
CANTON	20,196	0	239	119	206	3	3	998	106	33
CARLISLE	4,489	0	52	3	14	0	0	2,075	20	38
CARVER	11,577	0	136	27	97	0	0	1,211	57	39
CHARLEMONT	1,230	0	19	3	13	0	0	186	12	6
CHARLTON	11,149	1	144	47	87	3	3	0	36	57
CHATHAM	6,742	2	43	74	120	0	0	0	222	-77
CHELMSFORD	35,093	2	457	128	264	4	4	0	188	193
CHELSEA	28,747	2	664	197	282	4	4	0	235	382
CHESHIRE	3,851	0	37	8	29	1	0	0	17	8
CHESTER	1,459	0	16	2	15	0	0	0	6	1
CHESTERFIELD	1,084	0	8	3	5	0	0	97	5	3
CHICOPEE	53,003	1	612	267	675	7	6	207	296	-63
CHILMARK	759	3	9	2	6	0	0	89	50	3
CLARKSBURG	1,825	0	19	5	17	0	0	18	8	2
CLINTON	13,506	0	189	117	135	0	0	0	80	54

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TABLE A-4A
VITAL EVENTS BY COMMUNITY
1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS (2)		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
COHASSET	7,604	0	86	50	63	0	0	0	94	23
COLRAIN	1,800	0	22	3	16	2	2	0	13	6
CONCORD	19,463	1,414	161	338	136	1	1	0	146	25
CONWAY	1,765	1	21	2	8	0	0	0	1	13
CUMMINGTON	819	0	13	0	5	0	0	0	9	8
DALTON	6,777	0	67	60	72	0	0	691	41	-5
DANVERS	25,758	0	246	311	269	0	0	524	285	-23
DARTMOUTH	31,278	0	251	94	245	0	0	1,088	149	6
DEDHAM	23,019	1	314	132	231	2	2	510	170	83
DEERFIELD	5,397	0	53	13	41	0	0	0	42	12
DENNIS	14,222	0	130	139	254	0	0	0	111	-124
DIGHTON	6,382	0	52	18	60	1	0	0	38	-8
DOUGLAS	6,381	0	135	9	42	1	0	0	20	93
DOVER	5,897	0	72	14	31	0	0	0	13	41
DRACUT	28,527	0	417	44	185	1	1	0	137	232
DUDLEY	9,902	0	121	22	88	1	1	305	58	33
DUNSTABLE	2,911	0	35	4	18	0	0	112	7	17
DUXBURY	15,398	2	163	78	134	1	1	331	116	29
EAST BRIDGEWATER	13,590	0	192	49	93	1	1	93	93	99
EAST BROOKFIELD	2,188	0	21	6	18	0	0	0	12	3
EAST LONGMEADOW	14,693	0	155	216	170	0	0	0	68	-15
EASTHAM	4,816	0	26	24	63	0	0	0	38	-37
EASTHAMPTON	15,834	1	185	34	152	0	0	0	110	33
EASTON	22,503	0	272	72	129	0	0	0	137	143
EDGARTOWN	3,890	0	42	5	26	0	0	0	210	16
EGREMONT	1,234	1	7	5	7	0	0	2,672	8	0
ERVING	1,458	0	12	3	10	0	0	2,717	3	2
ESSEX	3,165	0	34	7	26	0	0	1,483	28	8
EVERETT	36,866	0	498	459	383	5	4	1,300	176	115
FAIRHAVEN	15,985	0	166	142	223	1	1	0	101	-57
FALL RIVER	89,276	1,618	1,104	1,443	1,109	8	8	0	526	-5
FALMOUTH	29,186	618	240	462	381	0	0	0	444	-141

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1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
FITCHBURG	40,032	6	554	317	402	1	0	0	200	152
FLORIDA	823	0	10	2	2	0	0	0	4	8
FOXBOROUGH	16,595	0	253	38	119	1	0	0	106	134
FRAMINGHAM	66,554	2,528	984	690	546	2	2	49	333	438
FRANKLIN	28,892	2	526	63	150	0	0	258	90	376
FREETOWN	9,253	0	63	9	39	0	0	41	148	24
GARDNER	21,454	515	233	297	221	0	0	10	106	12
GAY HEAD	234	0	2	1	6	0	0	0	24	-4
GEORGETOWN	7,637	0	121	11	48	1	1	0	25	73
GILL	1,635	0	10	2	17	0	0	0	9	-7
GLOUCESTER	29,456	2	325	314	322	3	1	0	303	3
GOSHEN	897	0	13	0	2	0	0	0	4	11
GOSNOLD	145	0	1	0	0	0	0	0	2	1
GRAFTON	14,787	1	229	22	95	4	4	1,297	66	134
GRANBY	5,917	0	66	7	33	0	0	549	15	33
GRANVILLE	1,477	0	24	0	7	0	0	1,121	3	17
GREAT BARRINGTON	8,056	151	48	212	128	1	1	546	62	-80
GREENFIELD	17,805	556	198	400	231	3	3	0	96	-33
GROTON	9,175	0	136	14	43	1	1	0	147	93
GROVELAND	5,974	0	74	6	30	0	0	0	19	44
HADLEY	4,459	1	31	60	40	0	0	0	27	-9
HALIFAX	7,469	0	98	10	45	0	0	0	40	53
HAMILTON	8,472	0	107	10	44	1	1	0	49	63
HAMPDEN	4,552	0	53	45	33	0	0	983	24	20
HANCOCK	701	0	4	2	4	0	0	694	2	0
HANOVER	13,591	0	156	16	80	0	0	778	84	76
HANSON	9,292	0	127	19	68	1	1	331	62	59
HARDWICK	2,692	0	32	5	23	1	1	0	15	9
HARVARD	13,706	0	57	9	22	0	0	0	43	35
HARWICH	11,194	1	104	116	194	3	2	0	114	-90
HATFIELD	3,105	1	28	8	20	0	0	0	22	8
HAVERHILL	57,186	448	845	569	522	5	3	0	365	323

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1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
HAWLEY	306	0	3	0	3	0	0	0	6	0
HEATH	807	0	9	0	9	0	0	3,012	6	0
HINGHAM	21,101	1	252	102	167	2	1	260	186	85
HINSDALE	2,101	1	19	25	21	0	0	548	3	-2
HOLBROOK	11,164	0	161	34	96	0	0	274	47	65
HOLDEN	16,058	0	188	70	126	2	2	0	57	62
HOLLAND	2,360	1	28	4	15	0	0	0	6	13
HOLLISTON	14,984	1	184	22	73	1	1	0	82	111
HOLYOKE	41,081	482	706	825	541	4	4	0	362	165
HOPEDALE	6,165	0	80	40	47	0	0	0	36	33
HOPKINTON	12,083	2	215	13	53	0	0	0	32	162
HUBBARDSTON	3,726	1	53	1	11	0	0	881	8	42
HUDSON	17,706	1	241	26	100	1	1	1,084	78	141
HULL	11,266	0	146	20	64	0	0	871	57	82
HUNTINGTON	2,245	0	22	0	12	0	0	1,583	8	10
IPSWICH	12,074	1	150	47	103	0	0	0	163	47
KINGSTON	10,625	0	195	68	84	0	0	0	52	111
LAKEVILLE	9,445	1	111	44	77	2	0	0	50	34
LANCASTER	7,410	1	75	23	50	2	2	0	41	25
LANESBOROUGH	3,165	0	15	9	33	0	0	0	17	-18
LAWRENCE	70,325	1,455	1,405	605	570	11	7	0	326	835
LEE	5,822	0	61	48	68	0	0	0	48	-7
LEICESTER	10,320	0	103	94	97	1	1	0	49	6
LENOX	4,705	2	41	55	79	0	0	0	131	-38
LEOMINSTER	41,875	1,516	637	484	373	5	5	0	260	264
LEVERETT	2,014	0	8	3	3	0	0	0	9	5
LEXINGTON	31,751	1	293	237	243	0	0	0	222	50
LEYDEN	753	0	5	0	3	0	0	0	2	2
LINCOLN	8,985	2	54	12	35	0	0	0	85	19
LITTLETON	7,842	1	117	52	73	0	0	0	35	44
LONGMEADOW	15,210	0	159	100	176	1	0	0	71	-17
LOWELL	106,449	2,825	1,686	1,276	938	8	5	0	582	748

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COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
LUDLOW	18,104	0	185	54	158	0	0	0	116	27
LUNENBURG	9,303	0	99	21	77	0	0	0	86	22
LYNN	83,464	3	1,370	673	797	9	6	0	402	573
LYNNFIELD	11,991	0	116	19	93	1	1	0	97	23
MALDEN	53,703	42	764	330	522	7	5	0	327	242
MANCHESTER	5,505	0	42	21	48	1	1	0	60	-6
MANSFIELD	20,445	0	413	30	111	2	2	0	86	302
MARBLEHEAD	21,093	0	250	99	177	1	0	0	147	73
MARION	5,918	0	52	71	60	0	0	0	28	-8
MARLBOROUGH	33,980	1	556	328	296	1	1	0	178	260
MARSHFIELD	23,225	0	381	51	170	2	2	0	134	211
MASHPEE	10,107	0	132	57	95	0	0	0	170	37
MATTAPOISETT	6,150	0	69	32	64	0	0	0	69	5
MAYNARD	10,659	0	140	11	62	4	3	0	42	78
MEDFIELD	12,078	0	154	21	65	0	0	0	28	89
MEDFORD	57,983	2	607	578	667	2	2	0	307	-60
MEDWAY	11,679	0	189	62	77	1	0	0	65	112
MELROSE	26,598	1,587	355	439	277	1	0	0	121	78
MENDON	4,908	0	60	10	31	0	0	0	34	29
MERRIMAC	6,472	0	86	9	32	0	0	0	17	54
METHUEN	42,050	1,196	568	511	391	2	1	0	189	177
MIDDLEBOROUGH	19,937	0	299	127	174	3	1	0	106	125
MIDDLEFIELD	437	1	6	1	3	0	0	0	3	3
MIDDLETON	6,292	1	82	7	37	0	0	0	35	45
MILFORD	24,904	612	382	395	220	4	2	0	135	162
MILLBURY	12,412	1	148	116	159	4	1	0	58	-11
MILLIS	7,699	1	128	13	63	1	0	0	71	65
MILLVILLE	2,788	0	44	4	15	0	0	0	5	29
MILTON	27,309	1	317	300	257	5	5	0	159	60
MONROE	94	0	1	2	2	0	0	0	0	-1
MONSON	9,240	0	95	21	59	0	0	0	44	36
MONTAGUE	7,629	0	98	30	96	0	0	0	56	2

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TABLE A-4A
VITAL EVENTS BY COMMUNITY
1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
MONTEREY	868	2	9	0	7	0	0	0	4	2
MONTGOMERY	735	0	7	9	4	0	0	0	2	3
MOUNT WASHINGTON	150	0	3	0	2	0	0	0	8	1
NAHANT	3,798	0	42	42	52	0	0	0	99	-10
NANTUCKET	7,705	76	125	58	66	2	2	0	358	59
NATICK	31,940	1	482	382	250	1	1	0	137	232
NEEDHAM	27,851	0	373	380	276	0	0	0	98	97
NEW ASHFORD	201	0	2	0	1	0	0	0	6	1
NEW BEDFORD	94,835	1,639	1,314	1,298	1,073	8	4	0	569	241
NEW BRAINTREE	1,040	0	9	1	5	0	0	0	0	4
NEW MARLBOROUGH	1,553	0	13	2	4	0	0	0	28	9
NEW SALEM	822	0	2	1	6	0	0	0	7	-4
NEWBURY	6,543	0	85	11	39	0	0	0	39	46
NEWBURYPORT	16,705	856	204	323	163	0	0	0	129	41
NEWTON	90,506	3,812	856	526	595	1	0	0	466	261
NORFOLK	10,478	0	151	115	31	0	0	0	28	120
NORTH ADAMS	16,589	336	171	237	208	0	0	0	85	-37
NORTH ANDOVER	26,295	0	362	177	239	0	0	0	171	123
NORTH ATTLEBORO	26,491	0	381	65	160	3	3	0	117	221
NORTH BROOKFIELD	5,037	0	51	12	31	1	1	0	22	20
NORTH READING	12,594	0	192	50	82	2	2	0	77	110
NORTHAMPTON	29,816	924	248	520	269	2	2	0	235	-21
NORTHBOROUGH	13,299	0	191	55	85	1	0	0	46	106
NORTHBRIDGE	13,879	0	187	152	166	0	0	0	52	21
NORTHFIELD	2,912	0	28	5	14	0	0	0	26	14
NORTON	16,317	0	274	54	97	0	0	0	75	177
NORWELL	10,129	0	144	105	94	1	0	0	75	50
NORWOOD	28,878	1,022	334	551	282	2	2	0	162	52
OAK BLUFFS	3,602	111	56	84	60	1	1	0	67	-4
OAKHAM	1,797	0	13	7	16	0	0	0	5	-3
ORANGE	7,826	0	76	10	58	0	0	0	34	18
ORLEANS	6,453	0	33	52	107	0	0	0	129	-74

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		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
OTIS	1,152	0	10	6	8	0	0	0	10	2
OXFORD	13,475	0	183	48	104	0	0	0	73	79
PALMER	12,548	1	148	123	146	1	1	0	56	2
PAXTON	4,654	1	31	2	25	0	0	0	13	6
PEABODY	50,979	1	564	391	470	4	3	0	235	94
PELHAM	1,470	0	8	1	3	0	0	0	3	5
PEMBROKE	15,863	0	266	36	108	1	1	0	47	158
PEPPERELL	11,657	0	187	13	48	0	0	0	32	139
PERU	853	0	8	0	3	0	0	0	2	5
PETERSHAM	1,198	0	14	5	10	0	0	0	10	4
PHILLIPSTON	1,958	0	18	2	6	0	0	0	7	12
PITTSFIELD	46,691	859	510	755	554	2	2	0	253	-44
PLAINFIELD	577	0	9	0	1	0	0	0	6	8
PLAINVILLE	8,073	0	99	17	55	1	1	0	15	44
PLYMOUTH	51,103	792	663	595	432	3	2	0	315	231
PLYMPTON	2,670	0	39	1	9	0	0	0	15	30
PRINCETON	3,531	2	43	6	13	0	0	0	45	30
PROVINCETOWN	3,249	0	18	33	58	0	0	0	41	-40
QUINCY	87,018	508	1,111	752	925	2	2	0	652	186
RANDOLPH	32,212	0	382	105	295	2	2	0	145	87
RAYNHAM	11,233	0	153	52	88	0	0	0	48	65
READING	24,106	1	329	92	188	2	2	0	77	141
REHOBOTH	10,131	0	111	16	39	0	0	0	50	72
REVERE	39,987	0	628	189	467	2	1	0	217	161
RICHMOND	1,822	2	10	0	18	0	0	0	6	-8
ROCHESTER	4,603	0	42	8	29	0	0	0	17	13
ROCKLAND	17,464	0	246	83	146	2	1	0	96	100
ROCKPORT	8,252	0	66	52	89	1	1	0	97	-23
ROWE	371	0	3	1	6	0	0	0	4	-3
ROWLEY	5,296	0	82	36	39	0	0	0	23	43
ROYALSTON	1,127	0	10	2	11	0	0	0	1	-1
RUSSELL	1,770	0	18	0	8	0	0	0	10	10

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COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
RUTLAND	5,818	0	90	5	24	1	1	0	33	66
SALEM	40,210	1,742	505	650	376	5	5	0	276	129
SALISBURY	7,212	0	110	34	78	0	0	0	46	32
SANDISFIELD	745	0	14	3	7	0	0	0	3	7
SANDWICH	19,600	1	231	110	147	0	0	0	120	84
SAUGUS	25,644	0	288	114	253	2	1	0	151	35
SAVOY	656	0	7	4	5	0	0	0	2	2
SCITUATE	16,808	1	224	82	146	0	0	0	179	78
SEEKONK	14,061	0	117	23	90	0	0	0	107	27
SHARON	17,047	2	214	39	105	1	0	0	58	109
SHEFFIELD	3,282	1	28	6	27	0	0	0	27	1
SHELBURNE	2,256	1	26	23	30	0	0	0	23	-4
SHERBORN	4,297	0	61	7	22	0	0	0	67	39
SHIRLEY	7,830	0	69	10	41	1	0	0	34	28
SHREWSBURY	29,053	1	457	85	245	5	5	0	107	212
SHUTESBURY	2,024	0	21	3	7	0	0	0	2	14
SOMERSET	17,822	1	139	77	182	0	0	0	105	-43
SOMERVILLE	78,112	2	941	252	570	3	2	0	320	371
SOUTH HADLEY	18,070	0	166	95	181	0	0	0	116	-15
SOUTHAMPTON	5,183	0	56	8	30	0	0	0	15	26
SOUTHBOROUGH	7,988	1	143	12	32	1	1	0	50	111
SOUTHBRIDGE	17,681	463	260	228	203	4	4	0	106	57
SOUTHWICK	8,852	0	108	17	69	1	1	0	56	39
SPENCER	12,036	0	151	36	113	0	0	0	93	38
SPRINGFIELD	150,414	5,925	2,368	2,178	1,438	21	15	0	857	930
STERLING	7,505	1	96	11	43	0	0	0	59	53
STOCKBRIDGE	2,292	0	14	3	12	0	0	0	40	2
STONEHAM	21,742	1,182	301	231	217	0	0	0	76	84
STOUGHTON	29,034	1	314	369	230	0	0	0	131	84
STOW	5,467	0	93	6	22	2	1	0	28	71
STURBRIDGE	8,244	1	98	17	68	1	0	0	125	30
SUDBURY	15,603	1	261	80	84	1	1	0	293	177

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VITAL EVENTS BY COMMUNITY
1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
SUNDERLAND	3,730	0	40	25	19	0	0	0	10	21
SUTTON	7,922	0	108	14	42	0	0	0	52	66
SWAMPSCOTT	14,917	0	162	82	165	0	0	0	64	-3
SWANSEA	16,182	0	142	47	156	0	0	0	112	-14
TAUNTON	54,297	722	821	518	457	6	5	0	316	364
TEMPLETON	7,050	0	81	50	82	0	0	0	40	-1
TEWKSBURY	30,268	1	396	124	203	2	2	0	123	193
TISBURY	3,507	3	35	7	28	0	0	0	57	7
TOLLAND	326	0	3	1	4	0	0	0	4	-1
TOPSFIELD	6,433	0	61	15	50	0	0	0	36	11
TOWNSEND	9,575	0	133	13	43	1	0	0	23	90
TRURO	1,783	0	14	10	26	0	0	0	34	-12
TYNGSBOROUGH	10,266	0	169	13	57	0	0	0	42	112
TYRINGHAM	398	0	1	1	2	0	0	0	2	-1
UPTON	5,373	1	110	18	41	2	1	0	24	69
UXBRIDGE	12,278	0	169	16	62	0	0	0	88	107
WAKEFIELD	25,201	0	317	169	212	1	1	0	154	105
WALES	1,721	0	21	7	15	0	0	0	7	6
WALPOLE	23,266	1	297	94	200	0	0	0	93	97
WALTHAM	59,165	308	706	446	496	4	4	0	359	210
WARE	9,855	235	117	97	98	2	1	0	61	19
WAREHAM	20,714	521	239	310	242	1	0	0	145	-3
WARREN	4,785	0	51	15	44	0	0	0	19	7
WARWICK	773	0	8	1	7	0	0	0	5	1
WASHINGTON	561	0	5	5	3	0	0	0	7	2
WATERTOWN	31,731	2	394	139	338	0	0	0	192	56
WAYLAND	13,067	1	174	38	80	0	0	0	56	94
WEBSTER	16,120	0	224	238	212	1	0	0	90	12
WELLESLEY	28,734	67	372	100	182	1	0	0	122	190
WELLFLEET	2,557	0	21	16	35	0	0	0	37	-14
WENDELL	1,084	0	13	1	6	0	0	0	0	7
WENHAM	5,530	0	46	10	37	1	1	0	5	9

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1998

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	6,291,183	82,216	81,406	55,954	55,204	414	315	38,722	38,722	26,202
WEST BOYLSTON	7,471	0	66	44	70	0	0	0	61	-4
WEST BRIDGEWATER	6,805	0	78	63	70	0	0	0	56	8
WEST BROOKFIELD	3,502	0	37	31	42	0	0	0	55	-5
WEST NEWBURY	3,848	1	66	6	18	0	0	0	13	48
WEST SPRINGFIELD	28,854	0	337	180	285	1	0	0	227	52
WEST STOCKBRIDGE	1,432	0	10	2	11	1	0	0	14	-1
WEST TISBURY	2,135	0	17	3	14	0	0	0	44	3
WESTBOROUGH	16,555	0	248	144	139	3	3	0	83	109
WESTFIELD	40,868	2	436	373	346	1	1	0	280	90
WESTFORD	19,422	1	333	66	75	0	0	0	86	258
WESTHAMPTON	1,525	0	5	3	5	0	0	0	3	0
WESTMINSTER	7,053	0	74	11	41	0	0	0	56	33
WESTON	11,076	0	122	85	118	0	0	0	98	4
WESTPORT	15,341	1	128	42	118	1	1	0	94	10
WESTWOOD	13,834	0	176	54	139	0	0	0	55	37
WEYMOUTH	53,670	3,470	696	938	523	4	3	0	305	173
WHATELY	1,310	0	15	1	7	0	0	0	13	8
WHITMAN	13,196	0	188	26	87	0	0	0	83	101
WILBRAHAM	13,414	1	115	133	115	1	1	0	80	0
WILLIAMSBURG	2,717	0	21	9	22	0	0	0	16	-1
WILLIAMSTOWN	8,967	0	45	152	89	0	0	0	67	-44
WILMINGTON	20,237	0	325	149	156	1	1	0	78	169
WINCHENDON	9,383	1	128	14	71	1	0	0	50	57
WINCHESTER	20,903	2,139	291	415	181	0	0	0	120	110
WINDSOR	777	0	9	4	6	0	0	0	2	3
WINTHROP	17,123	0	196	106	203	0	0	0	104	-7
WOBURN	36,965	1	436	196	319	0	0	0	244	117
WORCESTER	169,091	6,186	2,417	3,241	1,885	17	15	0	1,158	532
WORTHINGTON	1,298	1	8	2	2	0	0	0	8	6
WRENTHAM	10,395	1	160	88	91	0	0	0	50	69
YARMOUTH	22,649	0	217	201	386	4	4	0	148	-169
UNKNOWN	0	4	0	0	0	0	0	0	0	0

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TABLE A-4B
VITAL EVENTS BY COUNTY
1998

COUNTY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES (3)	DIVORCES (3)	RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)			
STATE TOTAL	6,291,263	82,216	81,406	55,954	55,204	414	315	38,722	16,010	26,202
BARNSTABLE	205,920	1,657	2,050	2,529	2,670	11	7	2,393	677	-620
BERKSHIRE	138,938	1,356	1,298	1,637	1,566	6	4	965	412	-268
BRISTOL	528,904	4,790	6,693	4,489	4,827	35	28	3,033	1,711	1,866
DUKES	14,272	117	162	102	140	1	1	454	55	22
ESSEX	715,669	8,350	9,598	6,081	6,415	50	35	4,470	2,180	3,183
FRANKLIN	71,615	559	732	548	668	5	5	411	287	64
HAMPDEN	454,635	6,414	5,963	4,842	4,602	39	30	2,813	1,151	1,361
HAMPSHIRE	158,777	1,167	1,330	925	1,070	7	6	841	274	260
MIDDLESEX	1,464,685	17,790	19,170	10,814	11,404	72	55	8,172	3,044	7,766
NANTUCKET	7,705	76	125	58	66	2	2	358	28	59
NORFOLK	657,683	5,080	8,432	5,115	5,690	29	22	3,513	1,535	2,742
PLYMOUTH	470,158	3,635	6,462	3,358	3,856	37	27	2,786	1,271	2,606
SUFFOLK	649,733	21,910	9,371	8,505	5,453	52	39	4,094	1,105	3,918
WORCESTER	752,569	9,315	10,020	6,951	6,777	68	54	4,419	2,280	3,243
UNKNOWN	0	0	0	0	0	0	0	0	0	0

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BIRTHS

SECTION B

BIRTHS

There were 81,406 live births to Massachusetts residents in 1998, a 0.1% increase from the 80,321 resident live births in 1997. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which the births occurred. Most data presented in this section are resident data. Table B-13 presents births by licensed maternity facility of occurrence, which includes births to women who live in other states.

OCCURRENCE BIRTHS

In 1998, 82,216 births occurred in Massachusetts. All but 268 births occurred at the 58 licensed maternity facilities in this state. The number of babies delivered at these maternity facilities ranged from 35 at Cambridge Birth Center in Cambridge to 9,395 at Brigham and Women's Hospital in Boston. The four hospitals with the greatest numbers of births -- Brigham and Women's Hospital (9,395), Baystate Medical Center (5,219), Beth Israel Deaconess Medical Center (5,182), and UMASS Memorial Medical Center - West Campus in Worcester (4,130) -- represented 29.1% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below.

1998 DISTRIBUTION OF MASSACHUSETTS OCCURRENCE BIRTHS BY HOSPITAL

NUMBER OF BIRTHS AT HOSPITAL	NUMBER OF HOSPITALS IN CATEGORY	TOTAL NUMBER OF BIRTHS IN CATEGORY	% OF TOTAL BIRTHS
< 500	13	2,828	3.4
500-999	15	10,206	12.4
1000-1499	10	12,323	15.0
1500-1999	7	11,447	13.9
≥ 2000	12	45,144	54.9
ALL OTHER[1]		268	0.3
TOTAL	56	82,216	100.0[2]

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[1] Includes hospitals without maternity units, home births, births en route to hospital and births occurring in a doctor's office/clinic.

[2] Percents do not sum to 100.0 due to rounding.

BIRTHS BY RACE/ETHNICITY

There are a number of points to keep in mind when analyzing 1998 data by race/ethnicity. Since June 1986, information on both race and ethnicity rather than just race has been collected. This provides improved data, particularly for Hispanic births. Presented for comparison below are resident birth data for calendar years 1997 and 1998, utilizing maternal race and Hispanic ethnicity information:

RACE AND HISPANIC ETHNICITY OF MOTHER
1997 - 1998

MATERNAL RACE/ETHNICITY	1998		1997		CHANGE (1997-1998)
	TOTAL BIRTHS	% OF BIRTHS	TOTAL BIRTHS	% OF BIRTHS	
White non-Hispanic	61,765	75.9	61,143	76.1	622
Black non-Hispanic	5,549	6.8	5,457	6.8	92
Hispanic	8,665	10.6	8,211	10.2	454
Asian	3,748	4.6	3,876	4.8	-128
Other[3]	1,530	1.9	1,427	1.8	103
Unknown[4]	149	0.2	207	0.3	-58
TOTAL	81,406	100.0	80,321	100.0	1,085

The final point which must be considered is the method used to present data by race/ethnicity. Massachusetts follows the recommendation from the National Center for Health Statistics (NCHS) for classifying race/ethnicity on the birth certificate according to the self-reported race/ethnicity of the mother. Beginning with 1989 births, birth data are presented by race/ethnicity of the mother only.

TEEN BIRTHS

The number of births to mothers aged 15-19 increased slightly from 5,801 in 1997 to 5,823 in 1998. The teen birth rate, however, decreased with the rate going from 33.8 in 1997 to the 1998 rate of 28.6 births per 1,000 women aged 15-19. The percentage of total births to women under age 20 continues to decrease markedly, from a peak of 12.7% in 1975 to 7.3% in 1998.

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[3] Other races include American Indian, Hawaiian, and Other.

[4] Unknown race: mothers did not indicate a race/ethnicity.

BIRTHS BY MARITAL STATUS

The percentage of births to unmarried women increased from 25.7% of all resident births in 1997 to 26.0% of all resident births in 1998. Over 90% of mothers under the age of 20 were unmarried while 20.8% of the mothers whose age was 20 or older were unmarried.

BIRTHS BY AGE OF MOTHER

The largest percentage increases in births between the years 1997 and 1998 (19%) were to mothers in the 45+ age group, as shown below. This percentage is based on relatively few births and should be interpreted with caution.

AGE OF MOTHER	NUMBER OF BIRTHS 1998	NUMBER OF BIRTHS 1997	DIFFERENCE IN THE NO. OF BIRTHS 1997-1998	PERCENTAGE CHANGE 1997-1998
< 20	5,902	5,904	-2	-0.03
20-24	11,819	11,653	166	1.4
25-29	20,936	20,715	221	1.1
30-34	26,425	26,445	-20	-0.08
35-39	13,701	13,155	546	4.2
40-44	2,501	2,346	155	6.6
≥ 45	119	100	19	19

BIRTHS BY CAESAREAN SECTION

The number of Caesarean section deliveries in Massachusetts increased from 16,122 in 1997 to 17,190 in 1998, an increase of about 6.6%. Caesarean section was the method of delivery for 21.0% of the 1998 occurrence births, compared to the 19.9% of Caesarean section deliveries in 1997. (Calculations are based on births with known method of delivery.)

HOSPITAL PROFILES

The following is a synopsis of the data presented in Table B-13, Occurrence and Caesarean Births by Licensed Maternity Facility:

- In 1998, 82,216 births occurred in Massachusetts, a decrease of 11.1% since 1990. Caesarean section was the method of delivery for 21.0% of 1998 births. (Calculations are based on births with known method of delivery.)

- In 1998, at least 10% of the births in six hospitals were low birthweight. These hospitals were: Baystate Medical Center, Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Massachusetts General Hospital, UMASS Memorial Hospital (Worcester) and New England Medical Center.

- In three hospitals, 50% or more of the deliveries were paid with public funds: Boston Medical Center, Cambridge Hospital, and Lawrence General Hospital. In seven facilities, less than 10% of deliveries were paid with public funds: Boston Regional Medical Center, Emerson Hospital, Newton-Wellesley Hospital, North Shore Birth Center, South Shore Hospital, The Birthplace At Wellesley, and Winchester Hospital.

- In 1998, 27 of the 57 licensed maternity facilities exceeded the state-wide average (79.7%) for adequacy of prenatal care for their patients. The three maternity facilities with the lowest reported rate of adequacy of prenatal care were: Boston Medical Center (43.8%), Malden Hospital (55.6%), and Lawrence General Hospital (58.8%).

- Among the Massachusetts licensed maternity facilities performing Caesarean sections, the lowest rates were at the following hospitals: Nantucket Cottage Hospital (11%), Tobey Hospital (13.2%), and Martha's Vineyard Hospital (14.4%).

- In 1998, the Caesarean section rate was less than 30% for the fifth consecutive year. Seven hospitals had Caesarean section delivery rates of 25% or more (Beth Israel Deaconess Medical Center, Boston Regional Medical Center, Fairview Hospital, Morton Hospital, North Adams Regional Hospital, Quincy Hospital, and St. Elizabeth's Medical Center of Boston).

LOW BIRTHWEIGHT INFANTS

The percentage of low birthweight infants (less than 2,500 grams or five pounds eight ounces) remained relatively constant from 7.0% in 1997 to 6.9% in 1998. The number of low birthweight deliveries decreased from 5,617 births in 1997 to 5,484 births in 1998.

COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks--consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers--to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. (The city of Boston constitutes its own Community Health Network Area.) It is hoped that the Networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

ADEQUACY OF PRENATAL CARE

The Index of Adequacy of Prenatal Care (based on the Kessner Index) has five categories (adequate, intermediate, inadequate, no prenatal care, and unknown), based on the trimester in which prenatal care began and the number of prenatal visits. The general classification scheme is as follows:

CATEGORY	TRIMESTER CARE BEGAN	# OF VISITS
Adequate	1	9 or more
Intermediate	1	5-8
	2	5 or more
Inadequate	1	1-4
	2	1-4
	3	1 or more
No prenatal care	--	0
Unknown	Unknown	Unknown

This classification is adjusted for gestational age to allow for proper classification of premature births.

BIRTHWEIGHT

The weight of an infant recorded at the time of delivery. It may be recorded in either pounds/ounces or grams. If recorded in pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams
1,000 grams = 2 pounds, 3 ounces

BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW)	An infant's weight of 2,500 grams (5.5 pounds) or more recorded at birth.
Low birthweight (LBW)	An infant's weight of less than 2,500 grams (5.5 pounds) recorded at birth.
Very low birthweight (VLBW)	An infant's weight of less than 1,500 grams (3.3 pounds) recorded at birth.

CAESAREAN SECTION or C-SECTION

Primary: A mother's first Caesarean section delivery.
Repeat: A Caesarean delivery that has been preceded by at least one Caesarean delivery.

ETHNICITY

See Race.

FOREIGN-BORN WOMEN

Women not born in the United States, its possessions or protectorates. Women born in Puerto Rico, the US Virgin Islands, and Guam are not foreign-born.

GRAVIDITY

The number of pregnancies experienced by a woman.

HEALTHY START

A Massachusetts-funded program providing services and financing for prenatal care to low-income pregnant women who lack health insurance, but do not qualify for Medicaid.

INFANT

A child whose age is less than one year (365 days).

LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

LOW BIRTHWEIGHT (LBW)

See Birthweight Categories.

NEONATE

A child under 28 days of age.

NORMAL BIRTHWEIGHT (NBW)

See Birthweight Categories.

OCCURRENCE BIRTH

A birth occurring in the Commonwealth of Massachusetts, regardless of the residency of the mother. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

PARITY

Total number of live births, including the present birth, ever born to the mother.

PLURALITY

The number of births to a woman produced in the same gestational period. A singleton is the birth of one infant, twins represent the births of two infants, etc.

POST NEONATE

A child whose age is at least 28 days, but less than one year.

PRIMARY CAESAREAN SECTION or C-SECTION

See Caesarean Section.

RACE

Assignment of an Infant's Race/Ethnicity: Prior to 1989, the race/ethnicity of an infant was assigned by combining information on the race/ethnicity of the mother and the race/ethnicity of the father. Since 1989, Massachusetts has followed the National Center for Health Statistics' recommendation of classifying births according to the self-reported race/ethnicity of the mother. Therefore, beginning in 1989, the race/ethnicity of an infant is identical to the self-reported race/ethnicity of the infant's mother.

Race of mother: For data presented in this publication, mother's race is as reported by the infant's mother.

Hispanic Ethnicity: Beginning in 1986, an identifier for Hispanic ethnicity was added to the birth certificate. Prior to this change, most Hispanics were included with whites and it was not possible to accurately calculate Hispanic-specific rates of natality.

REPEAT CAESAREAN SECTION or C-SECTION

See Caesarean Section.

RESIDENT BIRTH

The birth of an infant whose mother reports that her usual place of residence is in Massachusetts. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented in terms either of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events that occur to residents of the Commonwealth, wherever they occur. Occurrence data include all events that occur within the state, whether to residents or non-residents. There is an exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia that provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

VAGINAL BIRTH AFTER CAESAREAN (VBAC)

A vaginal delivery of an infant to a mother who had had at least one prior Caesarean section delivery.

VERY LOW BIRTHWEIGHT (VLBW)

See Birthweight Categories.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC BIRTH RATE	$\dfrac{\text{No. of Resident Live Births for a Specific Age Group of Mothers}}{\text{Total Female Population of That Specific Age Group}} \times 1{,}000$
CRUDE BIRTH RATE	$\dfrac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1{,}000$
GENERAL FERTILITY RATE	$\dfrac{\text{No. of Resident Live Births}}{\text{Total Female Population of Childbearing Age (15-44)}} \times 1{,}000$
CAESAREAN SECTION or C-SECTION RATE	$\dfrac{\text{No. of Resident Births Delivered by C-Section}}{\text{Total Number of Resident Births}} \times 100$

Figure B-1. Daily Birth Statistics, Massachusetts: 1998

Every day in 1998, residents of Massachusetts experienced an average of:

223 Births

47 Births by Caesarean Section

45 Births to women aged 35 or older

45 Births with less than adequate prenatal care

16 Births to women aged 15 through 19

15 Births weighing less than 2500 grams or 5 lbs. 8 oz. (low birthweight)

Table B-1. Trends in Birth Characteristics, Massachusetts: 1980, 1985, 1990-1998

Characteristic		1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births[1]	#[2]	72,591	81,781	92,461	88,176	87,202	84,627	83,758	81,562	80,164	80,321	81,406
	Rate[3]	53.4	57.5	62.1	59.4	59.1	57.6	57.0	55.5	54.6	54.7	55.4
Race of Mother												
White[4]	#	66,220	71,854	80,775	76,983	76,052	73,704	72,980	71,083	69,485	69,503	70,452
	%	91.2	87.9	87.4	87.3	87.2	87.1	87.1	87.2	86.7	86.5	86.5
Black	#	4,626	5,099	7,729	7,352	7,203	6,916	6,713	6,299	5,946	6,182	6,337
	%	6.4	6.2	8.3	8.3	8.3	8.2	8.0	7.7	7.4	7.7	7.8
Asian/Other[5]	#	1,069	1,741	3,688	3,566	3,582	3,664	3,790	3,817	3,950	4,217	4,248
	%	1.5	2.1	4.0	4.0	4.1	4.3	4.5	4.7	4.9	5.3	5.2
Unknown	#	676	3,087	269	275	365	343	275	363	783	419	369
	%	0.9	3.8	0.3	0.3	0.4	0.4	0.3	0.4	1.0	0.5	0.5
Teen Births (Ages 15-19)	#	7,694	6,859	7,258	6,892	6,555	6,469	6,412	5,990	5,758	5,801	5,823
	Rate[3]	28.1	28.7	35.4	35.4	34.5	34.0	33.2	30.3	28.5	28.5	28.6
Births to Unmarried Mothers	#	11,356	15,044	22,837	22,852	22,612	22,345	22,302	20,857	20,253	20,640	21,191
	%	15.6	18.4	24.7	25.9	25.9	26.4	26.6	25.6	25.3	25.7	26.0
Low Birthweight	#	4,413	4,751	5,388	5,199	5,137	5,202	5,335	5,174	5,105	5,617	5,655
	%	6.1	5.8	5.8	5.9	5.9	6.1	6.4	6.3	6.4	7.0	6.9
Adequate Prenatal Care[6]	%	82.0	79.4	80.1	81.6	82.9	83.8	84.3	84.2	79.9	80.0	79.8
	%	79.6	78.6	78.8	81.2	82.7	83.6	84.1	83.6	75.7	79.0	79.4

[1] Births presented in all tables are resident live births unless otherwise specified. [2] Differences in numbers of births from previous publications are the result of updated files. [3] Birth rates represent the total number of births to women age 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 women age 15-19. Birth rates and teen birth rates for 1991-1997 have been updated using MISER population estimates for 1991-1995 (released in September 1999) and 1996-1997 (released in November 1999). 1998 birth rates are calculated using the 1997 MISER population estimates. PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES. [4] On tables and graphs, which include data prior to June 1986, the race classifications do not include an ethnicity component; most Hispanics are included in the race category of white. [5] Other races include American Indian and others not specified. [6] Percentages in upper row are based on births with known scores of adequacy of prenatal care; bottom row percentages are based on total numbers of births. In subsequent tables and figures, percentage with adequate prenatal care is computed only on births with known adequacy scores. Adequacy of prenatal care has been recalculated for 1996, 1997, and 1998, which reflects computational adjustments to make Massachusetts data more comparable to the calculations recommended by the National Center for Health Statistics. Table taken from Advance Data: Births 1998.

Table B-2A. Birth Characteristics by Maternal Race/Hispanic Ethnicity, Massachusetts: 1998

Race and Hispanic Ethnicity	Births[1]		Teen Births				Birthweight				Prenatal Care				Cesarean Section		Breast Feading[4]	
			<18 Years		<20 Years		Very Low[2]		Low[3]		Adequate		First Trimester					
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
State Total	81,406	100.0	2,133	2.6	5,902	7.3	1,070	1.3	5,655	6.9	64,616	79.8	68,300	84.3	16,975	20.9	56,591	70.9
US-Born	66,529	81.7	1,852	2.8	5,121	7.7	871	1.3	4,625	7.0	53,933	81.5	56,973	86.1	14,026	21.2	44,592	68.6
Foreign-Born[6]	14,877	18.3	281	1.9	781	5.2	199	1.3	1,030	6.9	10,683	72.2	11,327	76.5	2,949	19.9	11,999	81.5
White Non-Hispanic	61,765	75.9	862	1.4	2,953	4.8	689	1.1	3,918	6.3	51,384	83.6	54,095	87.9	13,221	21.5	42,649	70.7
US-Born	56,958	92.2	836	1.5	2,846	5.0	655	1.1	3,628	6.4	47,531	83.9	50,075	88.3	12,275	21.6	38,766	69.7
Foreign-Born	4,807	7.8	26	0.5	107	2.2	34	0.7	290	6.0	3,853	80.6	4,020	84.0	946	19.7	3,883	82.3
Black non-Hispanic	5,549	6.8	301	5.4	745	13.4	154	2.8	657	11.8	3,749	67.9	4,014	72.7	1,250	22.6	3,798	68.9
US-Born	3,376	60.8	262	7.8	639	18.9	91	2.7	444	13.2	2,283	68.0	2,456	73.0	698	20.7	1,978	59.2
Foreign-Born	2173	39.2	39	1.8	106	4.9	63	2.9	213	9.8	1466	67.9	1558	72.1	552	25.4	1820	84.0
Hispanic	8,665	10.6	765	8.8	1,775	20.5	160	1.8	674	7.8	5,773	66.9	6,197	71.7	1,558	18.0	6,241	72.2
US-Born	5,169	59.7	649	12.6	1,431	27.7	107	2.1	464	9.0	3,449	67.0	3,725	72.3	881	17.1	3,224	62.5
Foreign-Born	3496	40.3	116	3.3	344	9.8	53	1.5	210	6.0	2324	66.8	2472	70.9	677	19.4	3017	86.4
Asian	3,748	4.6	96	2.6	185	4.9	38	1.0	280	7.5	2,697	72.2	2,886	77.2	617	16.5	2,802	75.2
US-Born	279	7.4	27	9.7	36	12.9	6	2.2	25	9.0	214	77.0	225	80.9	40	14.3	226	81.6
Foreign-Born	3469	92.6	69	2.0	149	4.3	32	0.9	255	7.4	2483	71.8	2661	76.9	577	16.7	2576	74.7
Other[7]	1,530	1.9	107	7.0	239	15.6	26	1.7	121	7.9	969	63.7	1,062	69.7	311	20.4	1,063	70.1
US-Born	628	41.0	77	12.3	165	26.3	9	1.4	59	9.4	421	67.4	456	73.0	118	19.0	369	59.3
Foreign-Born	902	59.0	30	3.3	74	8.2	17	1.9	62	6.9	548	61.2	606	67.5	193	21.4	694	77.6
Unknown[8]	149	0.2	2	--[5]	5	3.4	3	--[5]	5	3.4	44	62.0	46	64.8	18	20.9	38	67.9

[1] In the first category, "Births", percentages are based on column totals, percentages of US-Born and Foreign-Born are based on subtotals of each race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. For Prenatal Care, Cesarean Section, and Breastfeeding variables, percentages are calculated only for cases where information is known. [2] Very low birthweight: less than 1,500 grams or 3.3 pounds. [3] Low birthweight: less than 2,500 grams or 5.5 pounds. [4] Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. [5] Calculations based on fewer than five events are excluded. [6] "US Born" includes women born in Puerto Rico, the US Virgin Islands, and Guam. [7] Other: Mothers who designated themselves as Other race. [8] Unknown: Mothers who did not indicate a race/ethnicity.

Table B-2B. Birth Characteristics by Major Maternal Ancestries, Massachusetts: 1998

Ancestry	Births[1]		Teen Births				Birthweight				Prenatal Care				Cesarean Section		Breast Feading[4]	
			<18 Years		<20 Years		Very Low[2]		Low[3]		Adequate		1st Trimester					
	#	%[5]	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
State Total	81,406	100.0	2,133	2.6	5,902	7.3	1,070	1.3	5,655	6.9	64,616	79.8	68,300	84.3	16,975	20.9	56,591	70.9
Puerto Rican	4,463	5.5	568	12.7	1,265	28.3	96	2.2	406	9.1	2,889	65.0	3,132	70.4	768	17.2	2,705	60.7
Dominican	1,493	1.8	85	5.7	218	14.6	26	1.7	93	6.2	1,012	67.9	1,086	72.8	292	19.6	1,255	84.2
Salvadoran	599	0.7	18	3.0	63	10.5	12	2.0	44	7.3	330	55.5	354	59.4	92	15.5	519	86.8
Other Central American	663	0.8	29	4.4	69	10.4	4	--[5]	36	5.4	451	68.4	475	71.9	124	18.7	556	83.9
Other Hispanic[6]	1,447	1.8	65	4.5	160	11.1	22	1.5	95	6.6	1,091	75.7	1,150	79.7	282	19.5	1,206	83.6
Chinese	1,071	1.3	2	--[5]	5	0.5	10	0.9	61	5.7	861	80.6	900	84.3	197	18.4	874	81.8
Vietnamese	587	0.7	13	2.2	27	4.6	6	1.0	40	6.8	409	69.9	427	72.9	82	14.0	289	49.3
Cambodian	510	0.6	60	11.8	97	19.0	6	1.2	58	11.4	228	44.7	269	52.7	58	11.4	231	45.3
Asian Indian	612	0.8	0	0.0	2	--[5]	5	0.8	58	9.5	457	75.2	508	83.4	122	20.1	575	94.9
Other Asian/PI[7]	1,068	1.3	20	1.9	58	5.4	11	1.0	68	6.4	792	74.2	837	78.4	184	17.3	908	85.3
Cape Verdean	792	1.0	60	7.6	133	16.8	8	1.0	54	6.8	508	64.5	553	70.1	138	17.6	513	64.9
Brazilian	683	0.8	18	2.6	52	7.6	8	1.2	44	6.4	508	74.6	530	77.7	195	28.6	640	93.7
Other Portuguese	1,378	1.7	31	2.2	131	9.5	10	0.7	96	7.0	1,093	79.8	1,145	83.6	294	21.5	644	46.9
Haitian	950	1.2	17	1.8	45	4.7	33	3.5	91	9.6	596	63.1	644	68.2	254	26.8	765	80.5
W. Indian /Carib.[8]	586	0.7	14	2.4	44	7.5	13	2.2	55	9.4	409	70.3	440	75.6	121	20.7	503	85.8
African-American	2,814	3.5	226	8.0	543	19.3	76	2.7	351	12.5	1,930	69.0	2,080	74.2	578	20.6	1,643	58.5
African[9]	666	0.8	4	--[5]	15	2.3	16	2.4	58	8.7	467	70.2	486	73.1	173	26.1	591	88.7
Middle Easterner[10]	799	1.0	9	1.1	24	3.0	2	--[5]	40	5.0	603	75.7	651	81.7	145	18.1	701	88.0
Native American	280	0.3	17	6.1	46	16.4	1	--[5]	16	5.7	194	69.5	203	72.8	57	20.5	184	65.7
European	14,841	18.2	82	0.6	334	2.3	138	0.9	871	5.9	12,477	84.4	13,061	88.3	3,174	21.4	11,941	81.2

[1] In the first category, "Births", percentages are based on column totals. For all other categories, percentages are based on row totals. For Prenatal Care, Cesarean Section, and Breastfeeding variables, percentages are calculated only for cases where information is known. [2] Very low birthweight: less than 1,500 grams or 3.3 pounds. [3] Low birthweight: less than 2,500 grams or 5.5 pounds. [4] Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. [5] Calculations based on fewer than five events are excluded. [6] Other Hispanic Includes Mexican, Cuban, Colombian, and Other South American. [7] Other Asian and Pacific Islander includes Korean, Filipino, Japanese, Laotian, Thai, Pakistani and Hawaiian. [8] West Indian and Caribbean include Jamaican and Barbadian. [9] African includes Nigerian and other African. [10] Middle Easterner Includes Lebanese, Iranian, and Israeli.

Figure B-2. Resident Live Births by Mother's Race/Ethnicity: 1998

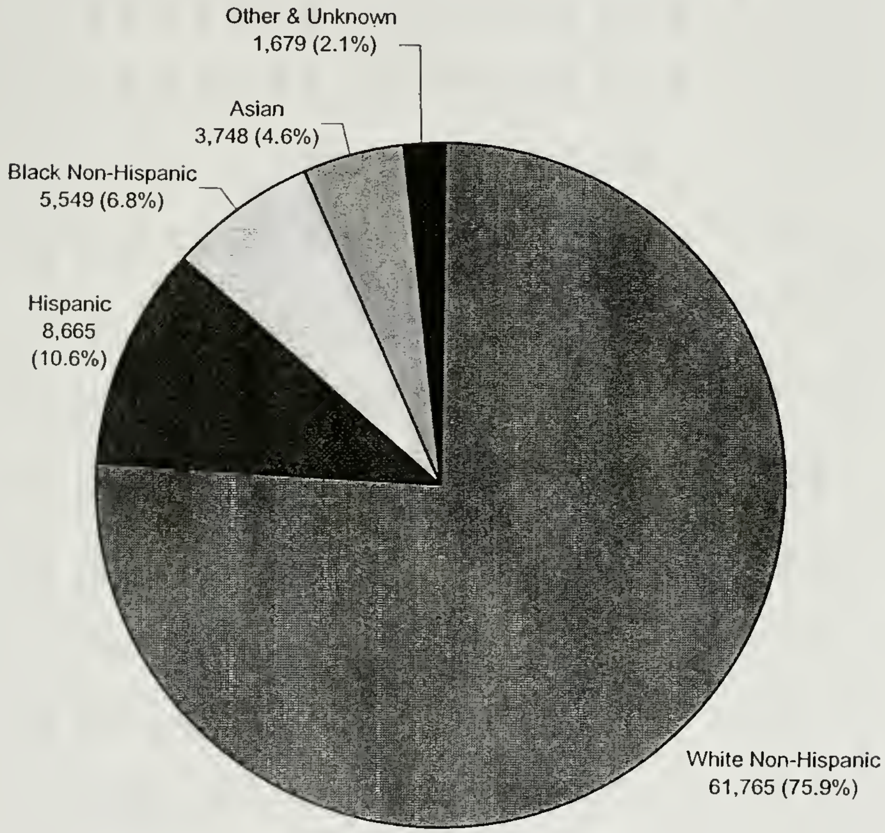


Figure B-3. Resident Live Births by Mother's Age: 1998

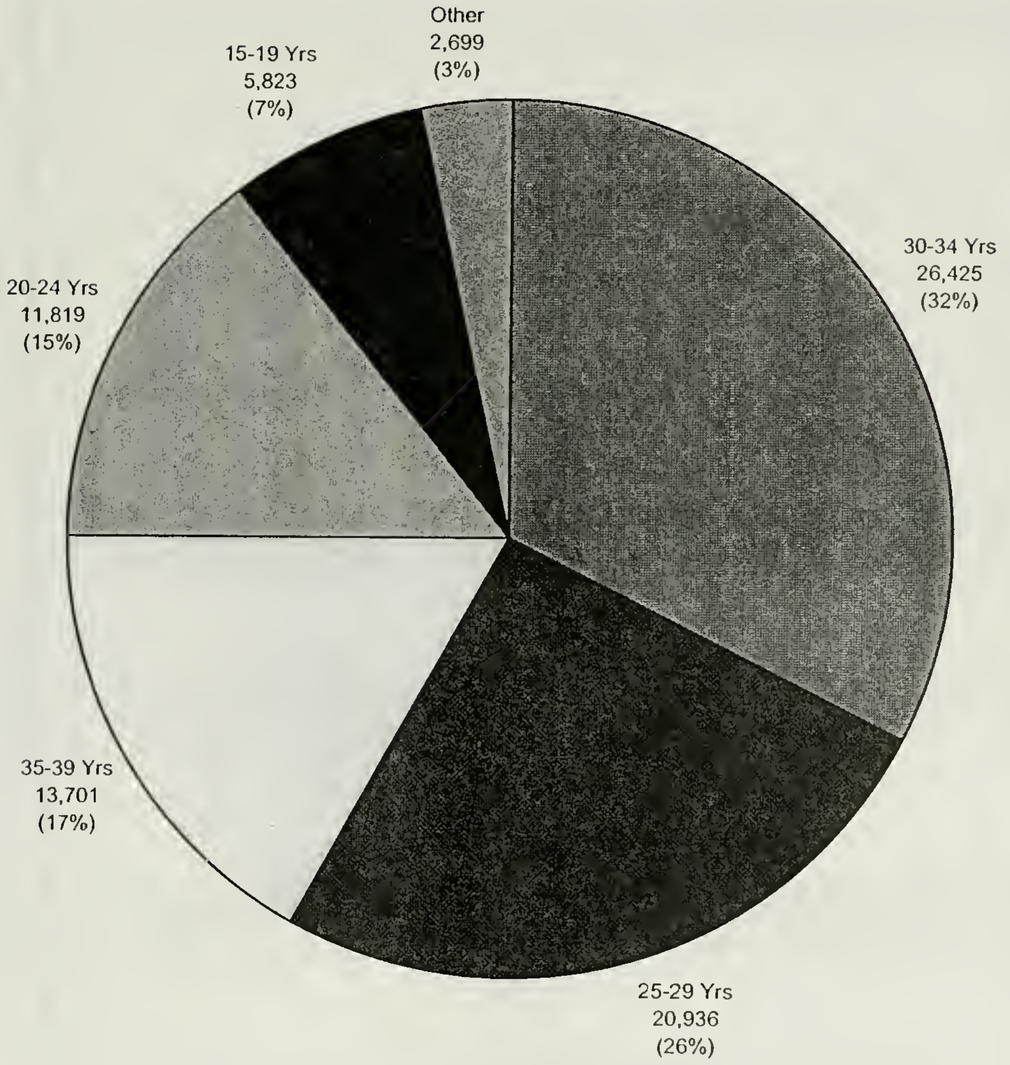


Table B-3A. Resident Birth Characteristics, 30 Largest Municipalities[1], Massachusetts: 1998

Municipality	Rank	Population	Crude Birth Rate[2]	Mother's Race and Ethnicity White Non-Hispanic %	Black Non-Hispanic %	Hispanic %	Asian or Other[3] %	Very Low Birthweight[4] (<1500 gms). %	Low Birthweight[4] (<2500 gms). %
STATE TOTAL		6,227,622	13.1	75.9	6.8	10.6	6.5	1.3	7.0
ARLINGTON	27	42,809	12.4	89.3	1.7	2.6	6.0	1.7	7.6
BARNSTABLE	26	45,748	11.2	87.7	2.9	3.5	5.7	--[5]	6.7
BOSTON	1	559,379	14.1	35.1	31.6	22.3	10.7	1.6	8.8
BROCKTON	8	89,121	16.3	49.7	23.6	9.9	16.7	2.4	10.1
BROOKLINE	15	58,906	11.1	75.0	2.9	2.7	19.1	--[5]	6.7
CAMBRIDGE	5	96,423	10.7	56.6	16.5	9.6	17.2	1.1	7.4
CHICOPEE	19	54,378	11.3	79.2	2.0	16.7	2.1	1.6	7.0
FALL RIVER	9	88,313	12.5	89.6	4.3	3.1	2.9	2.6	9.2
FRAMINGHAM	14	65,733	15.0	71.1	5.9	13.6	8.9	2.0	8.4
HAVERHILL	18	55,506	15.2	86.4	1.9	9.2	2.4	0.8	5.9
HOLYOKE	30	41,194	17.1	34.4	2.5	61.6	1.4	1.7	7.2
LAWRENCE	13	69,802	20.1	25.5	2.5	69.5	2.6	2.1	6.8
LOWELL	4	104,418	16.1	53.1	3.4	17.7	25.6	1.7	9.2
LYNN	11	83,295	16.4	48.4	13.2	27.8	10.5	1.8	8.0
MALDEN	22	52,701	14.5	62.2	12.0	4.6	20.8	1.4	8.2
MEDFORD	17	57,295	10.6	81.9	10.5	1.6	5.8	1.8	7.6
METHUEN	29	41,467	13.7	77.3	--[5]	15.5	6.5	1.6	6.3
NEW BEDFORD	6	95,057	13.8	72.7	4.9	13.9	8.3	1.1	6.9
NEWTON	7	90,464	9.5	82.1	2.3	4.1	11.4	--[5]	4.9
PEABODY	24	49,995	11.3	87.9	1.1	5.9	5.0	1.2	5.3
PITTSFIELD	25	47,050	10.8	92.0	2.9	2.2	2.9	1.4	6.3
PLYMOUTH	23	50,196	13.2	95.6	1.5	0.9	2.0	--[5]	4.7
QUINCY	10	86,256	12.9	75.1	4.8	2.6	17.6	1.1	5.3
REVERE	28	41,905	15.0	65.8	5.9	15.4	12.7	1.4	9.1
SOMERVILLE	12	77,302	12.2	60.4	10.0	17.2	12.4	1.3	6.7
SPRINGFIELD	3	148,178	16.0	35.3	22.6	38.6	3.5	2.0	9.9
TAUNTON	21	53,046	15.5	85.3	4.1	6.2	4.1	1.6	8.3
WALTHAM	16	58,011	12.2	62.9	6.9	18.4	11.5	2.4	7.5
WEYMOUTH	20	53,222	13.1	91.1	4.2	1.9	2.7	0.9	7.2
WORCESTER	2	167,507	14.4	56.8	9.1	24.9	9.1	1.7	7.8

Table B-3A.(cont'd) Resident Birth Characteristics, 30 Largest Municipalities[1], Massachusetts: 1998

	Births					Deaths			
Municipality	Adequate Prenatal Care[4]	Public Payment for Prenatal Care	Unmarried[4]	Teen Mothers 15 to 19 years		Infant Mortality Rate[6]		Neonatal Mortality Rate[6]	
	%	%	%	#	Rate[2]	1998	1996-1998	1998	1996-1998
STATE TOTAL	79.8	24.7	26.0	5,823	28.6	5.1	5.1	3.9	3.8
ARLINGTON	87.3	6.4	7.3	9	10.7	--[5]	5.9	--[5]	5.3
BARNSTABLE	81.1	27.4	26.7	31	25.1	--[5]	6.7	--[5]	3.3
BOSTON	76.4	47.3	44.8	823	44.8	5.8	7.2	4.3	5
BROCKTON	66.6	48.1	50.2	178	65.7	9.6	7.5	8.9	5.8
BROOKLINE	88.5	5.3	6.6	12	9.1	0.0	--[5]	0	--[5]
CAMBRIDGE	81.5	15.4	18.0	31	10.3	--[5]	2.7	--[5]	1.7
CHICOPEE	72.0	42.2	43.0	70	39.5	11.4	8.5	9.8	6.2
FALL RIVER	78.7	43.8	43.7	155	56.4	7.2	6.6	7.2	5.4
FRAMINGHAM	86.4	20.6	18.5	44	22.9	--[5]	2.4	--[5]	2.4
HAVERHILL	78.2	25.6	30.2	80	50.8	5.9	6.1	--[5]	4.6
HOLYOKE	70.3	66.9	62.0	189	131.3	--[5]	7.0	--[5]	6.1
LAWRENCE	58.2	64.1	60.6	298	113.4	7.8	9.3	5	6.8
LOWELL	59.9	48.3	48.9	239	65.8	4.7	5.4	3	3.6
LYNN	71.4	51.7	48.5	191	76.2	6.6	9.2	4.4	6.7
MALDEN	79.1	25.7	21.5	26	22.7	9.2	6.5	6.5	5.2
MEDFORD	82.1	17.0	18.6	19	10.9	--[5]	2.6	--[5]	2.6
METHUEN	75.2	22.5	25.2	47	36.4	--[5]	4.1	--[5]	2.9
NEW BEDFORD	73.4	52.1	49.7	220	72.5	6.1	5.3	--[5]	2.4
NEWTON	90.1	4.1	6.1	7	1.8	--[5]	5.1	0	3.9
PEABODY	84.2	14.2	16.8	19	13.6	--[5]	8.8	--[5]	7.1
PITTSFIELD	74.7	41.8	42.4	68	47.7	--[5]	5.5	--[5]	3.7
PLYMOUTH	79.7	19.5	20.8	38	21.7	--[5]	5.1	--[5]	4
QUINCY	87.1	21.1	19.8	46	23.1	--[5]	4.4	--[5]	3.1
REVERE	72.5	38.2	34.1	46	39.9	--[5]	2.8	--[5]	--[5]
SOMERVILLE	76.2	31.3	28.9	60	36.7	--[5]	3.2	--[5]	2.1
SPRINGFIELD	64.7	60.9	60.8	458	84.1	8.9	9.0	6.3	7.2
TAUNTON	80.8	31.5	32.5	70	45.5	7.3	5.5	6.1	3.8
WALTHAM	81.5	20.0	22.3	26	12.4	--[5]	5.2	--[5]	4.7
WEYMOUTH	91.9	13.2	19.4	27	19.7	--[5]	4.1	--[5]	3.6
WORCESTER	67.5	43.4	44.3	328	51.2	7.0	8.3	6.2	6.7

[1] The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to MISER 1997 population estimates (released in November 1999). [2] Crude birth rates represent the number of births per 1,000 residents; teen birth rates refer to number of births per 1,000 females ages 15-19. 1998 birth rates are calculated using the 1997 MISER population estimates (released in November 1999). [3] Mothers who designated themselves as Asian, American Indian or Other. [4] Percentages are calculated only for cases where information is known. [5] Calculations based on fewer than 5 events are excluded. [6] Deaths per 1,000 live births.

Table B-3B: Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 1998

CHNA	Population	Crude Birth Rate[1]	Mother's Race and Ethnicity: White non-Hispanic %	Mother's Race and Ethnicity: Black non-Hispanic %	Mother's Race and Ethnicity: Hispanic %	Mother's Race and Ethnicity: Asian or Other[2] %	Very Low Birthweight[3] (<1500 gms) %	Low Birthweight[3] (<2500 gms) %
STATE TOTAL	6,227,622	13.1	75.9	6.8	10.6	6.5	1.3	7.0
Community Health Network of Berkshire	139,534	9.3	93.6	1.5	1.9	2.2	1.6	6.3
Upper Valley Health Web (Franklin County)	86,725	10.4	94.0	0.8	2.4	2.6	1.6	6.8
Partnership for Health in Hampshire County (Northampton)	156,320	8.4	88.2	1.9	4.8	4.6	1.2	6.2
The Community Health Connection (Springfield)	289,271	13.6	58.5	14.0	24.6	2.8	1.6	8.3
Greater Southbridge Community Health Network	113,140	12.9	91.1	0.3	6.4	1.9	2.1	8.3
Community Partners for Health (Milford)	147,599	15.8	95.5	0.6	2.1	1.8	0.6	6.2
Community Health Network of Greater Metro West (Framingham)	362,270	15.0	88.2	1.7	4.7	5.1	1.0	6.0
Community Wellness Coalition (Worcester)	279,818	13.7	69.6	6.1	16.3	7.7	1.7	7.2
Fitchburg/Gardner Community Health Network	256,816	13.0	85.2	2.0	8.7	3.7	1.2	6.8
Greater Lowell Community Health Network	268,276	15.1	77.1	1.7	8.3	12.7	1.4	7.6
Greater Lawrence Community Health Network	174,449	15.9	54.4	1.7	39.2	4.8	1.5	6.1
Greater Haverhill Community Health Network	138,389	14.3	92.7	1.0	4.6	1.5	1.0	5.8
Greater Beverly/Gloucester Community Health Network	117,320	11.1	94.2	0.4	1.6	3.8	1.1	4.7
North Shore Community Health Network	274,579	12.9	73.8	5.8	14.5	6.0	1.5	7.2
Greater Woburn/Concord/Littleton Community Health Network	210,556	12.4	87.9	1.5	1.8	8.8	0.8	5.4
North Suburban Health Alliance (Medford/Malden/Melrose)	254,911	13.2	81.5	6.3	3.6	8.4	1.4	7.2
Greater Cambridge/Somerville Community Health Network	274,008	11.6	69.6	8.8	9.4	12.1	1.1	6.6
West Suburban Health Network (Newton/Waltham)	258,243	11.6	82.5	2.8	6.5	8.0	0.8	5.6
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	706,588	14.2	39.8	26.0	23.0	10.9	1.6	8.6
Blue Hills Community Health Alliance (Quincy)	363,531	12.5	83.1	6.1	2.1	8.5	1.1	5.9
Four (For) Communities (Holyoke)	158,434	12.5	67.3	1.6	29.5	1.5	1.7	7.0
Greater Brockton Community Health Network	229,083	14.0	73.3	11.9	5.5	9.1	1.8	8.6
South Shore Community Partners in Prevention (Plymouth)	174,915	14.1	96.2	1.3	0.8	1.7	0.8	5.4
Health & Education Response (Attleboro/Taunton)	230,976	14.8	91.8	2.1	2.9	2.9	1.3	6.9
Partners for a Healthier Community (Fall River)	138,244	10.9	92.1	3.2	2.3	2.2	2.3	8.6
Greater New Bedford Community Health Network	198,429	11.6	81.8	3.3	8.4	6.4	1.1	6.4
Cape and Islands Community Health Network	225,198	10.4	91.2	2.0	2.3	4.2	0.9	6.5

Table B-3B.(cont'd) Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 1998

	Births					Deaths[4]			
CHNA	Adequate Prenatal Care[3]	Public Payment for Prenatal Care	Unmarried[3]	Teen Mothers 15 to 19 years		Infant Mortality Rate		Neonatal Mortality Rate	
	%	%	%	#	Rate[1]	1998	1996-1998	1998	1996-1998
STATE TOTAL	79.8	24.7	26.0	5,823	28.6	5.1	5.1	3.9	3.8
Community Health Network of Berkshire	77.0	31.2	32.3	117	22.6	4.6	5.4	--[5]	3.5
Upper Valley Health Web (Franklin County)	78.6	28.4	32.1	92	33.5	5.6	5.9	5.6	3.7
Partnership for Health in Hampshire County (Northampton)	85.1	19.0	24.5	79	8.0	5.4	2.8	4.6	2.3
The Community Health Connection (Springfield)	71.5	43.6	43.8	550	53.5	6.9	7.1	4.8	5.6
Greater Southbridge Community Health Network	76.7	21.9	27.6	144	38.1	7.6	4.8	6.2	3.4
Community Partners for Health (Milford)	85.4	9.9	13.6	99	19.1	4.7	3.3	2.6	2.3
Community Health Network of Greater Metro West (Framingham)	86.8	8.8	10.2	146	14.0	4.0	4.3	2.9	3.4
Community Wellness Coalition (Worcester)	71.2	29.8	32.2	362	35.9	8.6	8.1	7.3	6.6
Fitchburg/Gardner Community Health Network	77.0	20.8	25.7	263	30.2	4.2	4.0	3.0	2.8
Greater Lowell Community Health Network	71.8	24.2	26.6	302	34.2	3.7	4.0	3.0	3.0
Greater Lawrence Community Health Network	68.2	38.4	38.2	362	57.8	4.7	6.0	2.9	4.4
Greater Haverhill Community Health Network	82.8	16.0	19.7	116	27.5	3.5	3.7	2.5	3.0
Greater Beverly/Gloucester Community Health Network	90.3	10.4	15.0	45	11.3	6.1	6.6	4.6	4.6
North Shore Community Health Network	79.2	28.1	29.0	284	35.7	6.2	7.1	4.5	5.3
Greater Woburn/Concord/Littleton Community Health Network	84.4	5.8	7.4	45	7.5	2.7	2.4	1.9	1.9
North Suburban Health Alliance (Medford/Malden/Melrose)	82.9	15.3	15.9	94	13.8	5.9	5.6	4.8	4.6
Greater Cambridge/Somerville Community Health Network	82.8	16.7	16.9	107	16.2	2.5	3.6	1.9	2.7
West Suburban Health Network (Newton/Waltham)	88.0	7.2	9.1	44	4.5	2.7	3.9	2.0	3.4
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	76.7	44.0	41.7	984	44.5	5.2	6.3	3.9	4.4
Blue Hills Community Health Alliance (Quincy)	89.4	12.7	14.2	124	12.4	5.1	4.5	4.0	3.4
Four (For) Communities (Holyoke)	72.8	46.2	44.0	308	54.2	6.1	6.3	5.6	5.1
Greater Brockton Community Health Network	77.5	27.6	31.6	254	31.8	5.6	5.5	5.3	4.3
South Shore Community Partners in Prevention (Plymouth)	87.2	11.5	15.6	106	17.4	4.0	4.6	3.2	3.8
Health & Education Response (Attleboro/Taunton)	83.2	17.1	20.2	194	25.4	5.8	4.6	4.1	3.3
Partners for a Healthier Community (Fall River)	81.2	36.0	37.7	194	43.5	5.9	6.2	5.9	4.9
Greater New Bedford Community Health Network	77.8	38.7	38.6	292	40.9	5.2	3.9	2.6	1.7
Cape and Islands Community Health Network	80.3	25.5	23.9	116	20.0	6.0	4.6	4.3	3.0

[1] Teen births per 1,000 females. 1998 birth rates are calculated using the 1997 MISER population estimates (released in November 1999). [2] Mothers who designated themselves as Asian, American Indian or Other.
[3] Percentages are calculated only for cases where information is known. [4] Deaths per 1,000 live births. [5] Calculations based on fewer than 5 events are excluded.

Table B-4. Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 1998

	1990		1998		
Mother's Age	Births[1]	Rate	Births	Rate[2]	Percent Change in Rate
12-14	124	1.3	79	0.7	-46.2
15-19	7,258	35.8	5,823	28.6	-20.1
20-24	18,115	70.5	11,819	50.6	-28.2
25-29	29,913	107.5	20,936	81.9	-23.8
30-34	25,687	92.1	26,425	102.8	11.6
35-39	9,795	40.1	13,701	51.6	28.7
40-44	1,522	6.9	2,501	10.0	44.9
45+	46	0.3[3]	119	0.5[3]	62.5
Birth rate, ages 15-44[4]	92,290	62.2	81,205	55.4	-10.9
Crude Birth Rate[5]	92,461	15.4	81,406	13.1	-14.9

[1] Differences in the number of births from previous publications are the result of updating of the birth files. The number of births for all age groups does not always add to the total number of births as mother's age is sometimes not recorded on the birth certificate.
[2] 1998 birth rates are calculated using the 1997 MISER population estimates (released in November 1999). [3] Denominator is female population ages 45-49. [4] Rate represents the total number of births to women age 15-44 per 1,000 women age 15 to 44. [5] Births per 1,000 residents (females and males). Includes births to mothers of all age groups and mothers for whom age is unknown.

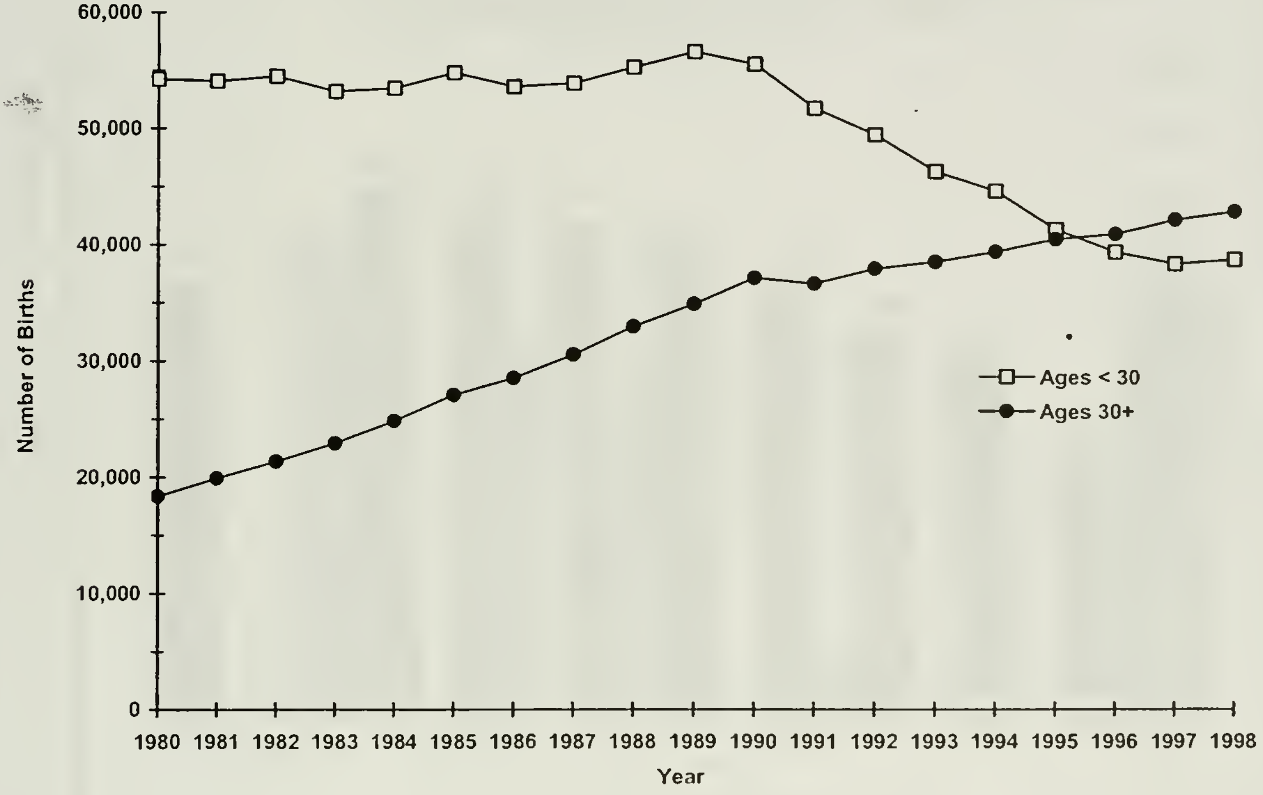
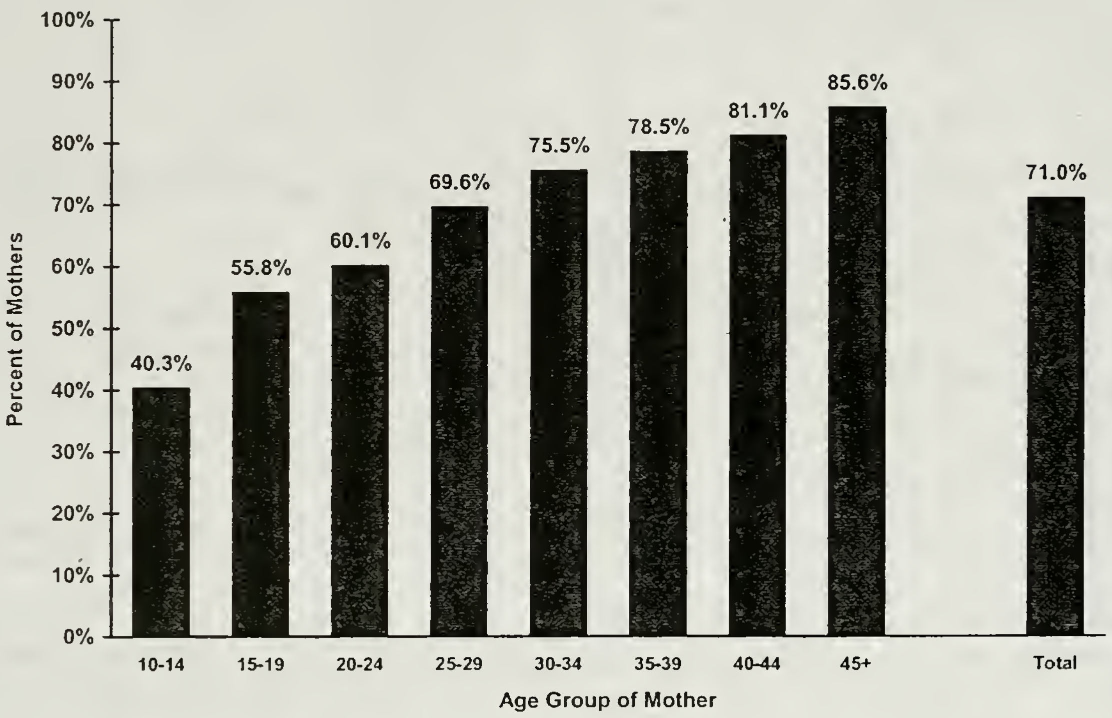


Figure B-4. Trends in the Number of Births by Mother's Age Group, Massachusetts: 1980-1998

Figure B-5. Percent of Mothers Breastfeeding or Intending to Breastfeed[1] by Age Group, Massachusetts[2]: 1998



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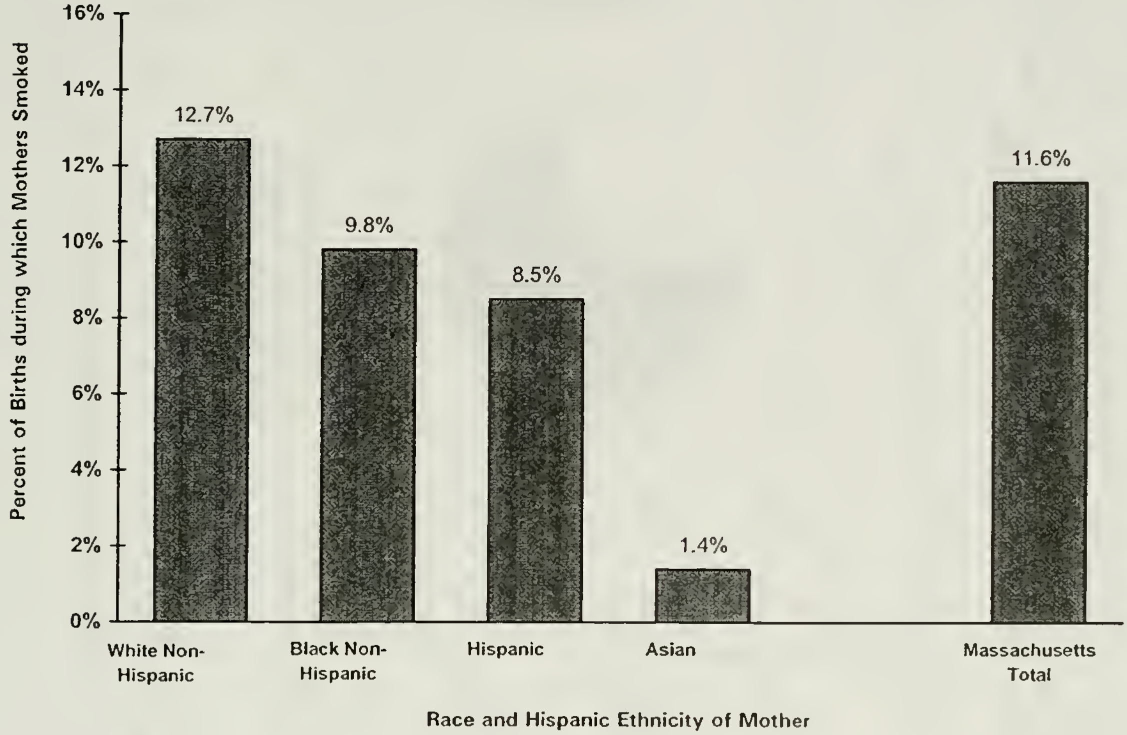
[1] Information about breastfeeding was reported by the mother at the time the birth certificate was completed.

[2] For race-specific breastfeeding rates see Table 14.

Figure B-6. Smoking Prevalence[1] During Pregnancy, by Race and Hispanic Ethnicity of Mother, Massachusetts: 1998



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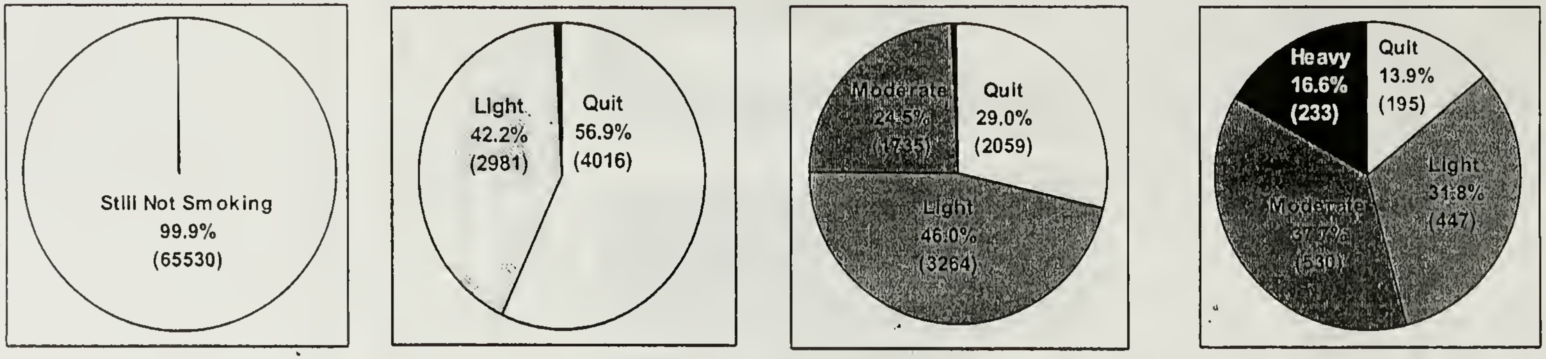
[1] Based on information provided on the birth certificate by mother. Mothers with more than one delivery are counted for each birth.

Figure B-7. The Distribution of Smoking Status during Pregnancy among Women Who Were Heavy, Moderate, Light or Non-Smokers[1] Prior to Pregnancy, Massachusetts: 1998

Smoking Status Prior to Pregnancy[2]:	Non-Smokers 80.8% (65,614)	Light Smokers 8.7% (7,062)	Moderate Smokers 8.7% (7,091)	Heavy Smokers 1.7% (1,405)

Smoking Status During Pregnancy:



99.9% of Non-Smokers continued not smoking (0.1% started smoking)

56.9% of Light Smokers quit smoking (0.9% increased)

75.0% of Moderate Smokers decreased the number of cigarettes smoked daily or quit (0.5% increased)

83.4% of Heavy Smokers decreased the number of cigarettes smoked daily or quit

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[1] Light Smokers=1-10 cigarettes daily; Moderate Smokers=11-20 cigarettes daily; Heavy Smokers=21 cigarettes or more daily.

[2] Based on mothers with known smoking status.

NOTE: Not all percentages add up to 100 due to a small number of mothers with unknown smoking status.

Table B-5A. Parity[1] by Age of Mother, Massachusetts: 1998

Age of Mother (years)		Total Births	1st	2nd	3rd	4th	5th+
STATE TOTAL	#[2]	81,406	35,302	27,700	12,396	4,020	1,988
	%[3]	100.0	43.4	34.0	15.2	4.9	2.4
10-14	#	79	79	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0
15-19	#	5,823	4,848	821	128	23	3
	%	100.0	83.3	14.1	2.2	0.4	–[4]
20-24	#	11,819	6,099	3,879	1,373	359	109
	%	100.0	51.6	32.8	11.6	3.0	0.9
25-29	#	20,936	9,814	6,956	2,868	909	389
	%	100.0	46.9	33.2	13.7	4.3	1.9
30-34	#	26,425	9,798	10,152	4,505	1,332	638
	%	100.0	37.1	38.4	17.0	5.0	2.4
35-39	#	13,701	3,885	5,057	2,997	1,130	632
	%	100.0	28.4	36.9	21.9	8.2	4.6
40-44	#	2,501	732	794	509	257	209
	%	100.0	29.3	31.7	20.4	10.3	8.4
45+	#	119	47	40	14	10	8
	%	100.0	39.5	33.6	11.8	8.4	6.7

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[1] The number of live births including this birth. [2] Totals include births of unknown parity and unknown age. [3] Percents may not sum to 100.0 due to rounding. [4] Calculations based on fewer than five events are excluded.

Table B-5B. Number and Percentage Distribution of Births[1] by Plurality and Age, Massachusetts: 1989-1998

		Singletons		Multiples						Total births	
				Twins		Triplets or more		Total Multiples			
Age Group	Year	#	%	#	%	#	%	#	%	#	%
All Ages											
	1989	89,059	97.5	2,174	2.4	81	0.1	2,255	2.5	91,314	100.0
	1990	90,049	97.4	2,312	2.5	99	0.1	2,411	2.6	92,460	100.0
	1991	85,802	97.3	2,285	2.6	89	0.1	2,374	2.7	88,176	100.0
	1992	84,722	97.2	2,347	2.7	133	0.2	2,480	2.8	87,202	100.0
	1993	82,055	97.0	2,367	2.8	205	0.2	2,572	3.0	84,627	100.0
	1994	81,187	96.9	2,357	2.8	214	0.3	2,571	3.1	83,758	100.0
	1995	78,935	96.8	2,429	3.0	198	0.2	2,627	3.2	81,562	100.0
	1996	77,355	96.5	2,621	3.3	194	0.2	2,815	3.5	80,170	100.0
	1997	77,203	96.1	2,856	3.6	262	0.3	3,118	3.9	80,321	100.0
	1998	78,004	95.8	3,114	3.8	288	0.4	3,402	4.2	81,406	100.0
Ages <35											
	1989	79,012	97.6	1,835	2.3	66	0.1	1,901	2.3	80,913	100.0
	1990	79,081	97.5	1,946	2.4	70	0.1	2,016	2.5	81,097	100.0
	1991	74,810	97.5	1,863	2.4	76	0.1	1,939	2.5	76,749	100.0
	1192	73,043	97.3	1,914	2.6	103	0.1	2,017	2.7	75,060	100.0
	1993	70,042	97.2	1,849	2.6	158	0.2	2,007	2.8	72,049	100.0
	1994	68,644	97.2	1,844	2.6	164	0.2	2,008	2.8	70,652	100.0
	1995	65,669	97.2	1,787	2.6	141	0.2	1,928	2.9	67,597	100.0
	1996	63,560	96.9	1,935	2.9	126	0.2	2,061	3.1	65,621	100.0
	1997	62,598	96.7	1,949	3.0	170	0.3	2,119	3.3	64,717	100.0
	1998	62,719	96.4	2,193	3.4	170	0.3	2,363	3.6	65,082	100.0
Ages 35+											
	1989	10,043	96.6	338	3.3	15	0.1	353	3.4	10,396	100.0
	1990	10,968	96.5	366	3.2	29	0.3	395	3.5	11,363	100.0
	1991	10,987	96.2	422	3.7	13	0.1	435	3.8	11,422	100.0
	1992	11,675	96.2	433	3.6	30	0.3	463	3.8	12,138	100.0
	1993	12,007	95.5	518	4.1	47	0.4	565	4.5	12,572	100.0
	1994	12,543	95.7	513	3.9	50	0.4	563	4.3	13,106	100.0
	1995	13,264	95.0	642	4.6	57	0.4	699	5.0	13,963	100.0
	1996	13,793	94.8	686	4.7	68	0.5	754	5.2	14,547	100.0
	1997	14,602	93.6	907	5.8	92	0.6	999	6.4	15,601	100.0
	1998	15,282	93.6	921	5.6	118	0.7	1,039	6.4	16,321	100.0

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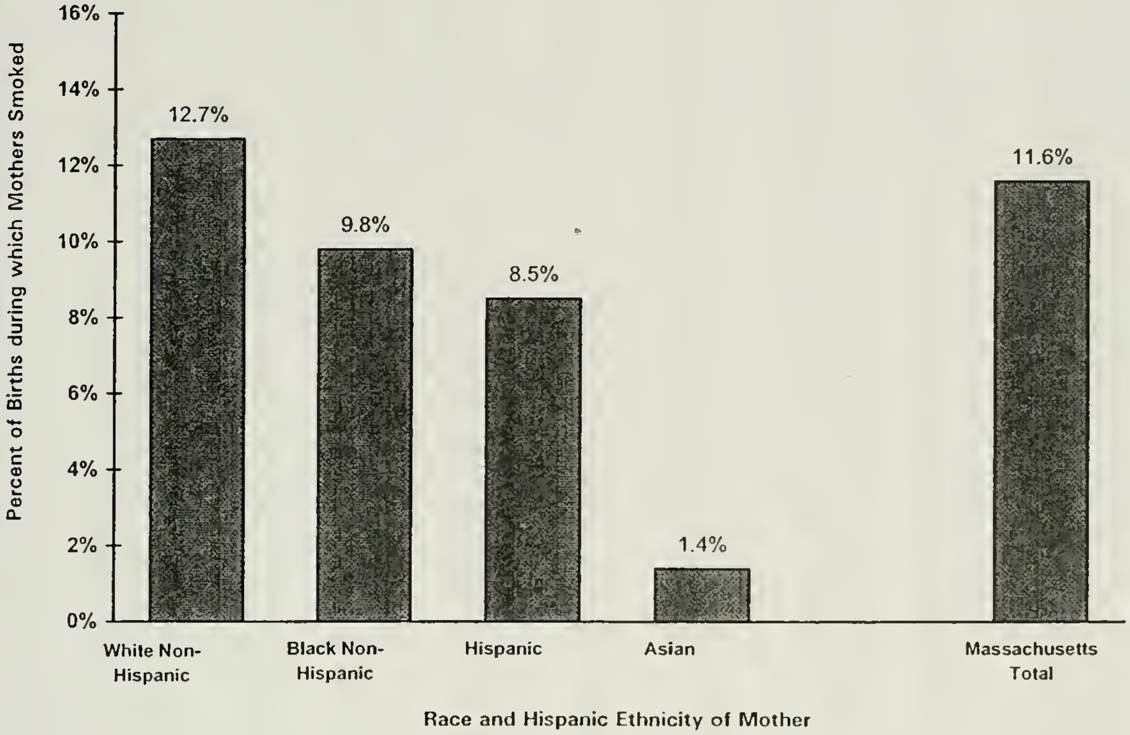
[1] Differences in the number of births from previous publications are the result of updating of files.

Figure B-6. Smoking Prevalence[1] During Pregnancy, by Race and Hispanic Ethnicity of Mother, Massachusetts: 1998



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[1] Based on information provided on the birth certificate by mother. Mothers with more than one delivery are counted for each birth.

Table B-7. Resident Births to Teenage Mothers: 1970-1998

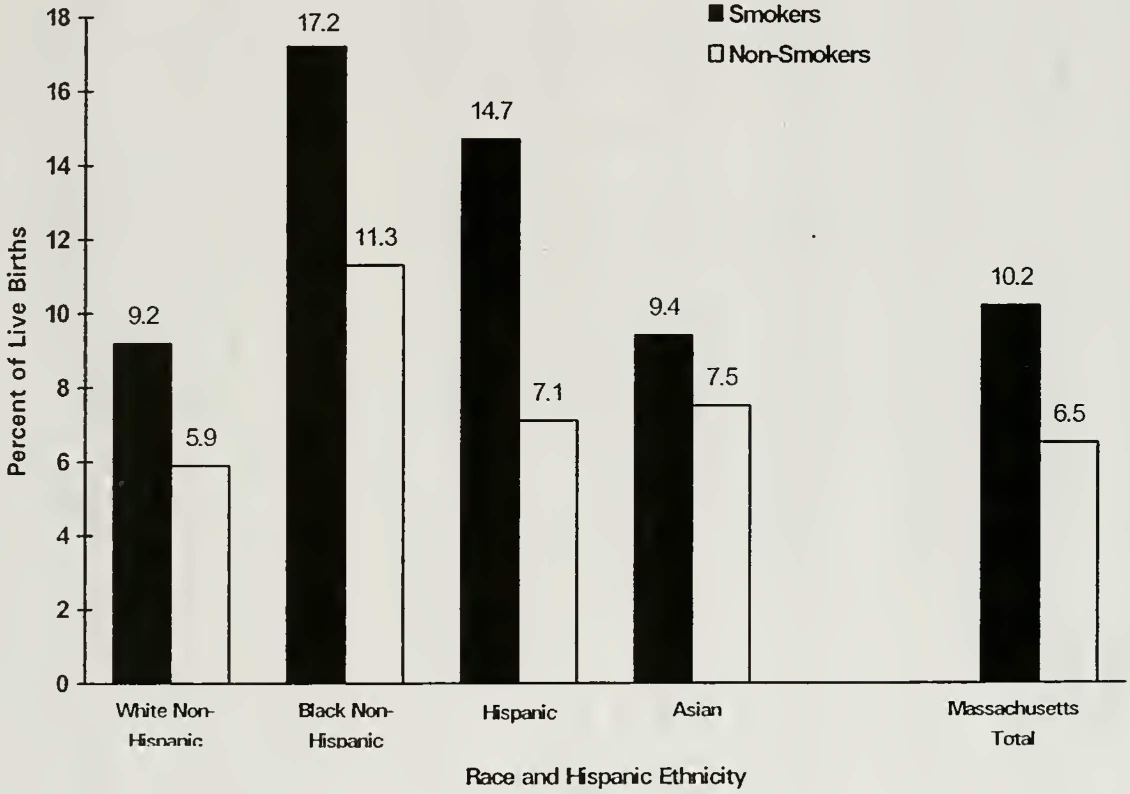
Year	Total Births	<14	14	15	16	17	18	19	Total <19	% of Total Births
				Age Of Mother						
1970	93,582	11	70	320	802	1,726	3,043	4,285	10,257	11.0%
1971	86,755	26	84	313	875	1,738	2,981	4,000	10,017	11.5%
1972	76,835	21	103	348	955	1,841	2,834	3,690	9,792	12.7%
1973	72,237	12	93	393	959	1,759	2,584	3,282	9,082	12.6%
1974	70,071	18	79	333	895	1,762	2,524	3,181	8,792	12.5%
1975	68,070	20	84	325	915	1,678	2,560	3,085	8,667	12.7%
1976	65,947	19	96	336	807	1,478	2,332	2,923	7,991	12.1%
1977	67,838	19	68	270	792	1,477	2,293	2,913	7,832	11.5%
1978	68,526	18	67	303	737	1,445	2,252	2,979	7,801	11.4%
1979	70,568	11	70	283	773	1,413	2,306	2,916	7,772	11.0%
1980	72,591	15	56	300	740	1,360	2,202	3,092	7,765	10.7%
1981	73,931	13	82	275	722	1,357	2,164	2,816	7,429	10.0%
1982	75,749	15	83	299	753	1,328	2,161	2,722	7,361	9.7%
1983	76,031	8	78	255	726	1,278	2,053	2,521	6,919	9.1%
1984	78,198	9	75	265	714	1,307	2,061	2,585	7,016	9.0%
1985	81,766	16	97	295	698	1,283	1,986	2,595	6,970	8.5%
1986	82,163	15	82	334	712	1,233	1,954	2,521	6,851	8.3%
1987	84,343	17	79	327	796	1,337	1,965	2,498	7,019	8.3%
1988	88,047	27	120	352	732	1,450	2,068	2,511	7,260	8.2%
1989	91,314	19	108	345	853	1,426	2,207	2,776	7,734	8.5%
1990	92,461	21	103	351	810	1,344	2,014	2,739	7,382	8.0%
1991	88,176	20	102	372	758	1,391	1,910	2,461	7,014	7.9%
1992	87,202	17	103	341	782	1,327	1,753	2,352	6,675	7.6%
1993	84,627	16	121	360	741	1,259	1,872	2,237	6,606	7.8%
1994	83,758	24	131	371	822	1,244	1,758	2,217	6,567	7.8%
1995	81,562	19	98	356	721	1,203	1,648	2,062	6,107	7.5%
1996	80,164	11	80	342	687	1,115	1,666	1,948	5,849	7.3%
1997	80,321	19	84	290	694	1,121	1,613	2,083	5,904	7.3%
1998	81,406	14	65	271	663	1,120	1,710	2,059	5,902	7.3%

Table B-8. Births by Birthweight, Race and Hispanic Ethnicity, Massachusetts: 1998

Birthweight	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other		Unknown	
	#	%[1]	#	%	#	%	#	%	#	%	#	%	#	%
State Total	81,406	100.0	61,765	100.0	5,549	100.0	8,665	100.0	3,748	100.0	1,530	100.0	149	100.0
<500	108	0.1	67	0.1	21	0.4	14	0.2	1	--[2]	3	--[2]	2	--[2]
500-999	409	0.5	251	0.4	61	1.1	70	0.8	13	0.3	13	0.8	1	--[2]
1000-1499	553	0.7	371	0.6	72	1.3	76	0.9	24	0.6	10	0.7	0	0.0
1500-1999	1,140	1.4	782	1.3	132	2.4	142	1.6	57	1.5	27	1.8	0	0.0
2000-2499	3,445	4.2	2,447	4.0	371	6.7	372	4.3	185	4.9	68	4.4	2	--[2]
2500-2999	11,616	14.3	7,964	12.9	1,032	18.6	1,524	17.6	830	22.1	253	16.5	13	8.7
3000-3499	28,878	35.5	21,193	34.3	2,017	36.3	3,449	39.8	1,605	42.8	592	38.7	22	14.8
3500-3999	25,231	31.0	20,250	32.8	1,418	25.6	2,287	26.4	816	21.8	440	28.8	20	13.4
4000-4499	8,250	10.1	6,989	11.3	361	6.5	614	7.1	182	4.9	97	6.3	7	4.7
4500-4999	1,446	1.8	1,247	2.0	52	0.9	97	1.1	28	0.7	21	1.4	1	--[2]
>=5000	163	0.2	136	0.2	10	0.2	13	0.2	2	--[2]	2	--[2]	0	0.0
Unknown	167	0.2	68	0.1	2	--[2]	7	0.1	5	0.1	4	--[2]	81	54.4
VLBW[3] (0-1499 gms)	1,070	1.3	689	1.1	154	2.8	160	1.8	38	1.0	26	1.7	3	--[2]
LBW[4] (0-2499 gms)	5,655	6.9	3,918	6.3	657	11.8	674	7.8	280	7.5	121	7.9	5	3.4

[1] Percentages are based on column totals. [2] Calculations based on fewer than five events are excluded. [3] VLBW: Very Low Birthweight. [4] LBW: Low Birthweight.

Figure B-8. Low Birthweight[1] Among Smoking and Nonsmoking[2] Mothers, by Race and Hispanic Ethnicity, Massachusetts: 1998



[1] Low birthweight: less than 2,500 grams or 5.5 pounds. [2] Based on information provided on the birth certificate by the mother.

NOTE: Maternal smoking is self-reported, usually following the birth of their child; these data should be interpreted cautiously.

Table B-9. Low Birthweight[1] by Maternal Age, Race and Hispanic Ethnicity, Massachusetts: 1998

Mother's Age	Total LBW Infants		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other		Unknown	
	#	%[3]	#	%[3]	#	%[3]	#	%[3]	#	%[3]	#	%[3]	#	%[3]
State Total[2]	5,655	6.9	3,918	6.3	657	11.8	674	7.8	280	7.5	121	7.9	5	3.4
<18	216	10.1	65	7.5	37	12.3	84	11.0	16	16.7	14	13.1	0	0.0
18-19	307	8.1	152	7.3	46	10.4	90	8.9	10	11.2	9	6.8	0	0.0
20-24	812	6.9	430	6.1	124	9.9	207	7.8	34	7.1	16	4.5	1	–[4]
25-29	1,287	6.1	900	5.7	136	9.6	138	6.5	81	6.8	30	7.6	2	–[4]
30-34	1,765	6.7	1,362	6.1	184	14.5	110	7.7	77	6.4	31	9.1	1	–[4]
35-39	1,014	7.4	809	6.9	101	14.6	36	6.2	48	8.2	19	11.9	1	–[4]
40+	254	9.7	200	9.2	29	16.5	9	8.2	14	12.3	2	--[4]	0	0.0

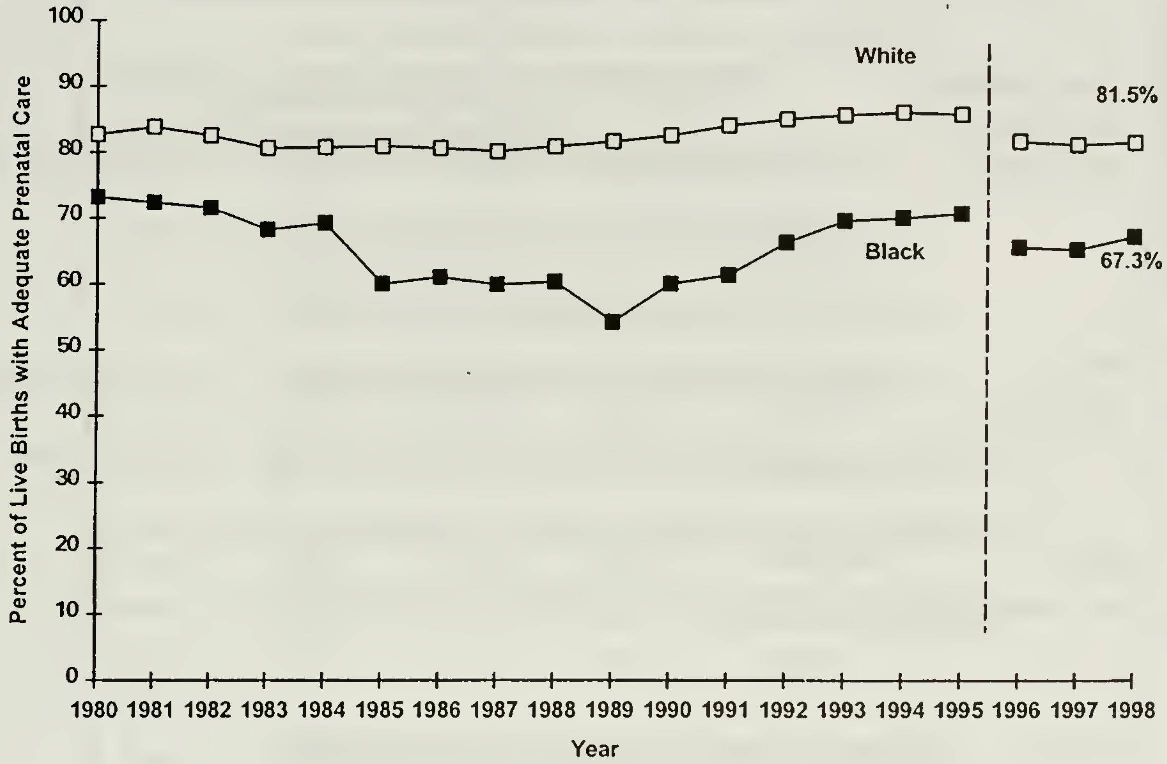
[1] Low Birthweight: less than 2,500 grams or 5.5 pounds at birth. [2] State totals include women of unknown age. [3] Percentages are based upon the number of low birthweight infants divided by the total births in each age and race/ethnicity category. [4] Calculations based on fewer than five events are excluded.

Table B-10. Births by Gestational Age[1], Race and Hispanic Ethnicity, Massachusetts: 1998

Gestational Age	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other[3]		Unknown	
(weeks completed)	#	%[2]	#	%	#	%	#	%	#	%	#	%	#	%
State Total	81,406	100.0	61,765	100.0	5,549	100.0	8,665	100.0	3,748	100.0	1,530	100.0	149	100.0
<20	21	0.0	10	0.0	6	0.1	3	--[7]	0	0.0	2	--[7]	0	0.0
20-23	139	0.2	80	0.1	28	0.5	22	0.3	4	--[7]	3	--[7]	2	--[7]
24-27	316	0.4	190	0.3	44	0.8	60	0.7	11	0.3	11	0.7	0	0.0
28-31	643	0.8	431	0.7	87	1.6	88	1.0	24	0.6	13	0.8	0	0.0
32-35	2,754	3.4	2,013	3.3	259	4.7	316	3.6	109	2.9	56	3.7	1	--[7]
36	2,244	2.8	1,627	2.6	209	3.8	254	2.9	110	2.9	40	2.6	4	--[7]
37-39[4]	29,678	36.5	21,973	35.6	2,165	39.0	3,371	38.9	1,544	41.2	606	39.6	19	12.8
40	30,207	37.1	23,380	37.9	1,796	32.4	3,119	36.0	1,373	36.6	514	33.6	25	16.8
41	12,138	14.9	9,532	15.4	750	13.5	1,155	13.3	464	12.4	228	14.9	9	6.0
42	2,669	3.3	2,102	3.4	181	3.3	242	2.8	90	2.4	51	3.3	3	--[7]
43	100	0.1	67	0.1	6	0.1	20	0.2	6	0.2	1	--[7]	0	0.0
44+	32	0.0	21	0.0	3	--[7]	6	0.1	2	--[7]	0	0.0	0	0.0
Unknown[5]	465	0.6	339	0.5	15	0.3	9	0.1	11	0.3	5	0.3	86	57.7
Very early gestation, <28 weeks	476	0.6	280	0.5	78	1.4	85	1.0	15	0.4	16	1.0	2	--[7]
Preterm, <37 weeks[6]	6,117	7.5	4,351	7.0	633	11.4	743	8.6	258	6.9	125	8.2	7	4.7

[1] A clinical estimate of the number of weeks of pregnancy completed; as estimated by the attendant at birth or the postnatal physician. [2] Percentages are based on column total. [3] Other races include American Indian and others not specified. [4] Normal gestational age is defined as 37-42 weeks. [5] Estimate of gestational age not provided. [6] Also known as early gestational age, premature delivery, or preterm delivery. [7] Calculations based on fewer than five events are excluded.

Figure B-9. Trends in Adequacy of Prenatal Care[1,2] by Race[3], Massachusetts: 1980-1998



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[1] Calculations are based on births with known Adequacy of Prenatal Care scores.

[2] Due to changes beginning in 1996 in the collection of information on Adequacy of Prenatal Care, caution should be used when comparing these data over time.

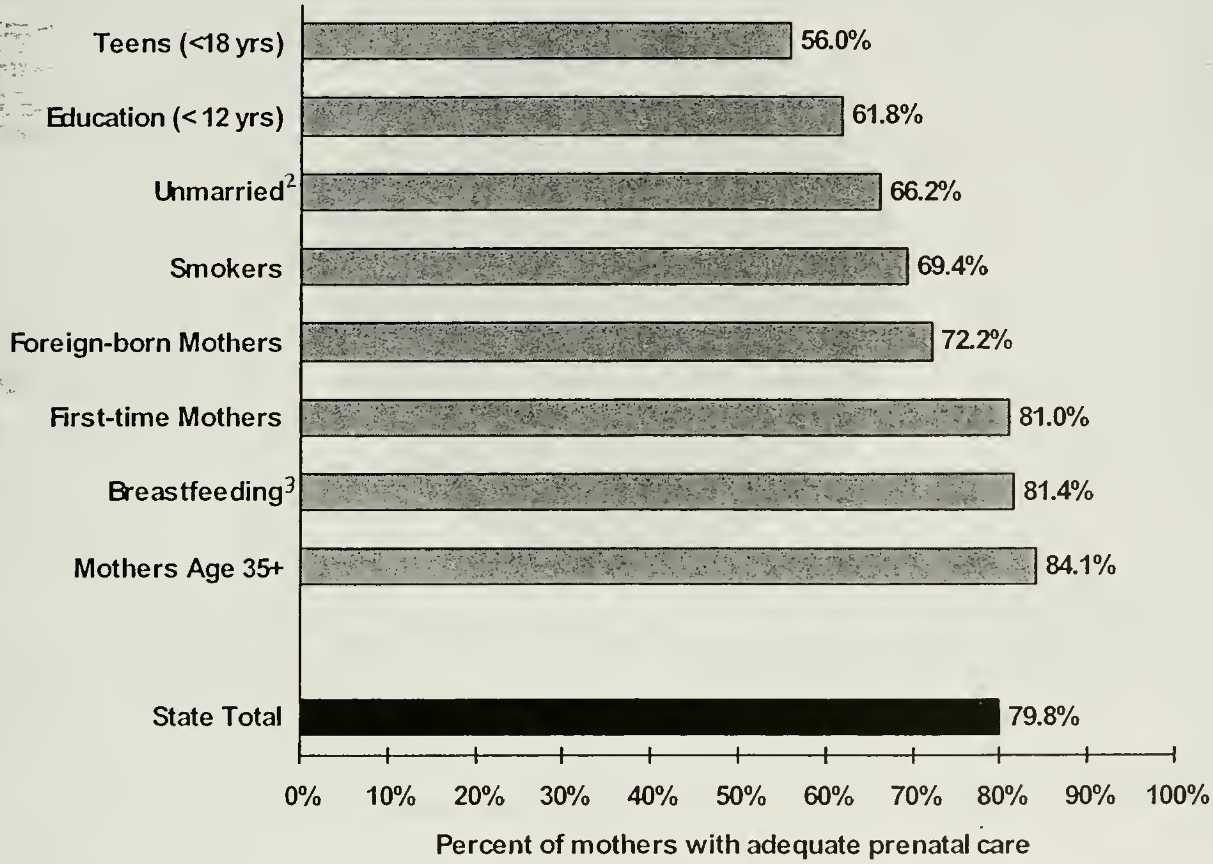
[3] On tables and graphs which include data prior to June 1986, the race classifications do not include ethnicity; most Hispanics are included in the race category of whites.

Table B-11. Low Birthweight by Level of Prenatal Care and Race and Hispanic Ethnicity, Massachusetts: 1998

Race, Ethnicity, and Birthweight		Total[1]	Level of Prenatal Care[2]		
			Adequate	Intermediate	Late/None
STATE TOTAL	Total Births	80,937	64,616	13,388	2,933
	# LBW[3]	5,591	4,226	1,086	279
	% LBW	6.9	6.5	8.1	9.5
White non- Hispanic	Total Births	61,462	51,384	8,591	1,487
	# LBW[3]	3,869	3,095	659	115
	% LBW	6.3	6.0	7.7	7.7
Black non-Hispanic	Total Births	5,519	3,749	1,290	480
	# LBW[3]	649	433	145	71
	% LBW	11.8	11.5	11.2	14.8
Hispanic	Total Births	8,628	5,773	2,214	641
	# LBW[3]	671	424	172	75
	% LBW	7.8	7.3	7.8	11.7
Asian	Total Births	3,736	2,697	875	164
	# LBW[3]	280	183	86	11
	% LBW	7.5	6.8	9.8	6.7
Other/Unknown	Total Births	1,592	1,013	418	161
	# LBW[3]	122	91	24	7
	% LBW	7.7	9.0	5.7	4.3

[1] All data are based on the 80,937 births with known Adequacy of Prenatal Care data. [2] Detailed explanation of the levels of prenatal care is presented on page 27. [3] Low birthweight: less than 2,500 grams or 5.5 pounds.

Figure B-10 . Adequacy of Prenatal Care[1] for Selected Population Characteristics, Massachusetts: 1998

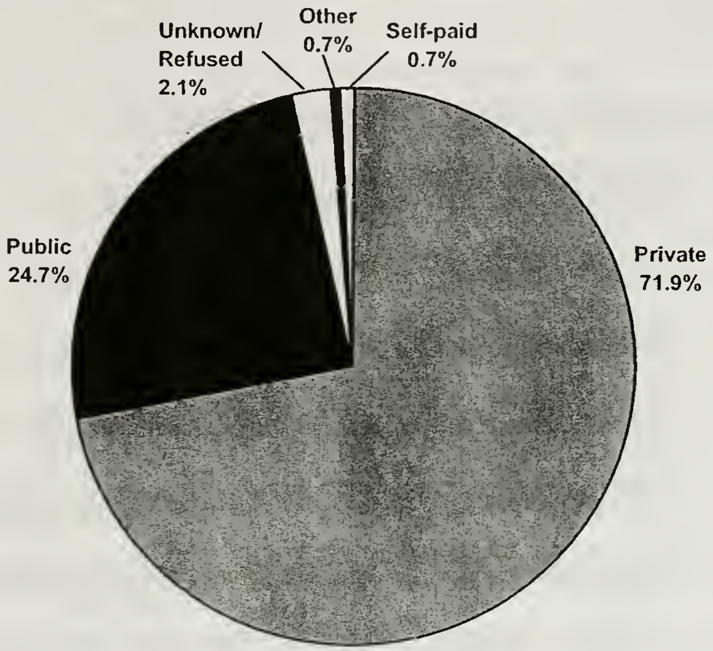


[1] Calculations are based on births with known Adequacy of Prenatal Care scores.

[2] Women 20 years of age and older.

[3] Mother was or was intending to breastfeed at the time the birth certificate was completed.

Figure B-11. Distribution of Prenatal Care Payment Source[1], Massachusetts: 1998



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[1] The source of payment for prenatal care is obtained from the mother's medical record through the birth facility. Private: Blue Cross/Blue Shield, commercial insurance and HMO's. Public: Medicaid, Medicare, Healthy Start, free care, and other government sources. Other: Worker's Compensation and other sources.

Table B-12. Birth Characteristics by Source of Prenatal Care Payment, Race and Hispanic Ethnicity, Massachusetts: 1998

Race, Ethnicity, and Payment Source	Births[1]		Teen Births				Birthweight			
			<18 Years		<20 Years		Very Low[2]		Low[3]	
	#	%	#	%	#	%	#	%	#	%
STATE TOTAL[4]	81,406	100.0	2,133	2.6	5,902	7.3	1,070	1.3	5,655	6.9
Public	20,070	24.7	1,456	7.3	4,042	20.1	322	1.6	1,683	8.4
Medicaid[5]	17,656	21.7	1,384	7.8	3,818	21.6	299	1.7	1,525	8.6
Other Public[6]	2,414	3.0	72	3.0	224	9.3	23	1.0	158	6.5
Private[7]	58,511	71.9	605	1.0	1,659	2.8	647	1.1	3,682	6.3
White non-Hispanic	61,765	100.0	862	1.4	2,953	4.8	689	1.1	3,918	6.3
Public	9,532	15.4	442	4.6	1,672	17.5	108	1.1	725	7.6
Medicaid[5]	8,567	13.9	423	4.9	1,601	18.7	106	1.2	673	7.9
Other Public[6]	965	1.6	19	2.0	71	7.4	2	--[8]	52	5.4
Private[7]	49,937	80.8	377	0.8	1,146	2.3	506	1.0	2,964	5.9
Black non-Hispanic	5,549	100.0	301	5.4	745	13.4	154	2.8	657	11.8
Public	3,007	54.2	227	7.5	566	18.8	85	2.8	356	11.8
Medicaid[5]	2,717	49.0	219	8.1	542	19.9	74	2.7	318	11.7
Other Public[6]	290	5.2	8	2.8	24	8.3	11	3.8	38	13.1
Private[7]	2,409	43.4	66	2.7	159	6.6	57	2.4	273	11.3
Hispanic	8,665	100.0	765	8.8	1,775	20.5	160	1.8	674	7.8
Public	5,789	66.8	637	11.0	1,495	25.8	107	1.8	462	8.0
Medicaid[5]	4,904	56.6	605	12.3	1,399	28.5	101	2.1	418	8.5
Other Public[6]	885	10.2	32	3.6	96	10.8	6	0.7	44	5.0
Private[7]	2,695	31.1	112	4.2	242	9.0	46	1.7	189	7.0
Asian	3,748	100.0	96	2.6	185	4.9	38	1.0	280	7.5
Public	903	24.1	75	8.3	134	14.8	15	1.7	82	9.1
Medicaid[5]	804	21.5	71	8.8	127	15.8	14	1.7	72	9.0
Other Public[6]	99	2.6	4	--[8]	7	7.1	1	--[8]	10	10.1
Private[7]	2,771	73.9	18	0.6	47	1.7	21	0.8	193	7.0
Other/Unknown[8]	1,530	100.0	107	7.0	239	15.6	26	1.7	121	7.9
Public	829	54.2	74	8.9	173	20.9	7	0.8	58	7.0
Medicaid[5]	655	42.8	66	10.1	148	22.6	4	--[8]	44	6.7
Other Public[6]	174	11.4	8	4.6	25	14.4	3	--[8]	14	8.0
Private[7]	656	42.9	32	4.9	65	9.9	16	2.4	60	9.1

Table B-12 (cont'd). Birth Characteristics by Source of Prenatal Care Payment, Race, and Hispanic Ethnicity, Massachusetts: 1998

	Prenatal Care							
Race, Ethnicity, and	Adequate		Began 1st Trimester		Cesarean Section		Breastfeeding[10]	
Payment Source	#	%	#	%	#	%	#	%
STATE TOTAL[4]	64,616	79.8	68,300	84.3	16,975	20.9	56,591	70.9
Public	12,889	64.4	13,900	69.4	3,533	17.7	11,770	58.7
Medicaid[5]	11,388	64.7	12,298	69.8	3,055	17.4	9,864	55.9
Other Public[6]	1,501	62.4	1,602	66.5	478	19.8	1,907	79.0
Private[7]	49,881	85.4	52,429	89.8	12,952	22.2	43,970	75.2
White non-Hispanic	51,384	83.6	54,095	87.9	13,221	21.5	42,649	70.7
Public	6,543	68.9	6,983	73.5	1,766	18.6	4,941	51.9
Medicaid[5]	5,830	68.3	6,239	73.0	1,555	18.2	4,207	49.1
Other Public[6]	713	74.0	744	77.2	211	21.9	734	76.1
Private[7]	43,191	86.7	45,367	91.0	11,036	22.1	37,102	74.3
Black non-Hispanic	3,749	67.9	4,014	72.7	1,250	22.6	3,798	68.9
Public	1,775	59.3	1,966	65.5	562	18.7	1,848	61.5
Medicaid[5]	1,650	61.0	1,825	67.3	495	18.2	1,635	60.2
Other Public[6]	125	43.4	141	49.0	67	23.1	213	73.4
Private[7]	1,928	80.3	1,995	83.0	666	27.7	1,888	78.4
Hispanic	5,773	66.9	6,197	71.7	1,558	18.0	6,241	72.2
Public	3,594	62.3	3,884	67.3	943	16.3	3,954	68.3
Medicaid[5]	3,071	62.8	3,321	67.9	793	16.2	3,215	65.6
Other Public[6]	523	59.3	563	63.7	150	17.0	739	83.5
Private[7]	2,102	78.3	2,220	82.6	590	21.9	2,166	80.4
Asian	2,697	72.2	2,886	77.2	617	16.5	2,802	75.2
Public	500	55.5	538	59.6	105	11.7	495	54.8
Medicaid[5]	446	55.5	482	60.0	93	11.6	420	52.2
Other Public[6]	54	55.1	56	56.6	12	12.4	75	75.8
Private[7]	2,154	77.9	2,303	83.2	499	18.0	2,270	81.9
Other/Unknown[9]	969	63.7	1,062	69.7	311	20.4	1,063	70.1
Public	473	57.3	525	63.6	155	18.8	528	63.7
Medicaid[5]	388	59.5	428	65.5	117	18.0	383	58.5
Other Public[6]	85	49.1	97	56.1	38	21.8	145	83.3
Private[7]	472	72.0	508	77.4	147	22.5	513	78.4

[1] In the "Births" category, percentages are based on race/ethnicity totals (group column). For all other categories, percentages are based on Birth totals (row total) excluding unknowns for each characteristic. [2] Very low birthweight: less than 1,500 grams or 3.3 pounds. [3] Low Birthweight: less than 2,500 grams or 5.5 pounds. [4] Total births does not equal Public + Private. Other categories of prenatal care payment are also included in Total: Workers' Compensation, self-paid, and other. [5] Medicaid/MassHealth. [6] Other Public: Healthy Start, other government programs, and free care. [7] Private: Blue Cross/Blue Shield, commercial insurance, and HMO. [8] Calculations based on fewer than five events are excluded. [9] Other: Mothers who self-designated other races or for whom race was unknown. [10] Mother was intending to breastfeed at the time the birth certificate was completed.

Table B-13. Birth Characteristics by Licensed Maternity Facility[1], Massachusetts: 1998

Facility	Location	Occurrence Births[2]	Low Birthweight	Public Payment for Delivery[3]	Adequate Prenatal Care
STATE TOTAL[4,5]		82,216	6.9	24.6	79.7
Anna Jaques Hospital	Newburyport	856	4.9	10.9	84.4
Baystate Medical Center	Springfield	5,219	10.6	40.8	73.1
Berkshire Medical Center	Pittsfield	859	4.1	30.7	73.9
Beth Israel Deaconess Medical Center	Boston	5,182	11.1	15.5	79.3
Beverly Hospital	Beverly	2,556	3.6	19.4	87.4
Boston Medical Center	Boston	1,704	9.4	85.4	43.8
Boston Regional Medical Center	Stoneham	1,181	4.1	4.6	81.0
Brigham and Women's Hospital	Boston	9,395	11.0	17.1	96.9
Brockton Hospital	Brockton	1,062	7.7	37.1	73.0
Cambridge Birth Center	Cambridge	35	0.0	40.0	74.3
Cambridge Hospital	Cambridge	653	4.6	52.4	60.6
Cape Cod Hospital	Barnstable	1,032	4.8	25.9	81.3
Caritas Good Samaritan Medical Center Cushing Campus	Brockton	1,250	4.9	37.1	64.5
Caritas Norwood Hospital	Norwood	1,022	2.5	10.6	89.7
Charlton Memorial Hospital	Fall River	1,617	6.9	33.9	80.9
Cooley-Dickinson Hospital	Northampton	917	3.3	18.7	86.8
Deaconess/Waltham Hospital	Waltham	306	3.6	29.7	80.3
Emerson Hospital	Concord	1,413	3.4	4.0	85.4
Fairview Hospital	Great Barrington	150	4.0	30.9	81.1
Falmouth Hospital	Falmouth	617	3.1	28.5	77.8
Franklin Medical Center	Greenfield	555	3.1	31.6	81.8
Hale Hospital	Haverhill	448	3.8	41.3	73.8
Harrington Memorial Hospital	Southbridge	461	3.9	39.3	85.2
Heywood Memorial Hospital	Gardner	515	4.1	30.7	74.3
Holy Family Hospital and Medical Center	Methuen	1,195	5.1	18.7	75.5
Holyoke Hospital	Holyoke	480	5.0	45.6	68.8
Jordan Hospital	Plymouth	792	3.3	24.5	69.6
Lawrence General Hospital	Lawrence	1,453	4.6	55.6	58.8
Leominster Hospital	Leominster	1,514	4.0	27.4	77.5
Lowell General Hospital	Lowell	2,231	5.5	33.8	61.9
Malden Hospital	Malden	41	7.3	28.2	55.6
Martha's Vineyard Hospital	Oak Bluffs	111	3.6	30.6	84.7
Mary Lane Hospital	Ware	234	3.4	34.6	78.5
Massachusetts General Hospital	Boston	2,449	10.7	31.3	68.2

Table B-13. (cont'd) Births Characteristics by Licensed Maternity Facility[1], Massachusetts: 1998

Facility	Location	Occurrence Births[2]	Low Birthweight	Public Payment for Delivery[3]	Adequate Prenatal Care
Melrose-Wakefield Hospital	Melrose	1,587	4.3	23.4	85.6
Mercy Hospital Center for Health	Springfield	694	2.4	46.0	73.5
Metro West Medical Center - Framingham Union Campus	Framingham	2,527	4.6	12.6	92.8
Milford-Whitinsville Hospital	Milford	611	3.4	25.2	82.3
Morton Hospital	Taunton	719	4.3	36.0	80.5
Mount Auburn Hospital	Cambridge	1,227	3.3	10.1	87.5
Nantucket Cottage Hospital	Nantucket	73	0.0	27.4	76.1
New England Medical Center	Boston	1,488	21.5	34.6	84.5
Newton Wellesley Hospital	Newton	3,808	3.8	1.6	84.7
North Adams Regional Hospital	North Adams	335	3.6	31.9	83.0
North Shore Birth Center	Beverly	88	0.0	9.1	79.5
North Shore Medical Center	Salem	1,741	4.7	27.6	74.5
Quincy Hospital	Quincy	503	2.2	30.0	77.2
Saint Vincent Hospital	Worcester	2,047	3.6	17.0	79.8
Saints Memorial Medical Center	Lowell	587	4.9	29.5	74.0
South Shore Hospital	Weymouth	3,465	4.4	5.0	95.2
St. Elizabeth's Medical Center of Boston	Boston	1,647	9.4	27.3	82.6
St. Luke's Hospital	New Bedford	1,637	4.9	45.6	77.0
Sturdy Memorial Hospital	Attleboro	808	4.2	25.1	77.7
The Birthplace At Wellesley	Wellesley	66	0.0	3.0	69.7
Tobey Hospital	Wareham	520	2.1	32.6	77.4
UMass Memorial Medical Center - West Campus	Worcester	4,130	11.3	28.1	65.3
Winchester Hospital	Winchester	2,135	4.2	3.1	80.4
All Other Hospitals		4	0.0	0.0	25.0
Home births, enroute, other		264	4.5	32.8	53.2

[1] A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. [2] See section definitions for an explanation of occurrence births. [3] Public payment for delivery includes Medicaid/Commonhealth, Medicare, Healthy Start, other government programs, and free care. [4] Percentages calculated on births with known method of delivery. [5] The percentages provided in this row are based on occurrence births and may differ from data presented elsewhere in this book which are based on resident births. For percentage calculations, denominators exclude unknown values.

Note: Malden Hospital closed to births on February 9, 1998. Quincy Hospital closed to births on November 1998. Name changes: Caritas Norwood Hospital from Norwood Hospital, UMASS Memorial Medical Center – West Campus from Memorial Hospital.

Table B-13A. Cesarean Section Deliveries and Vaginal Births after Cesarean Section (VBACs) by Licensed Maternity Facility[1], Massachusetts: 1998

Facility	Occurrence Births[2]	Total C-Sections		Primary C-Section		Repeat C-Section		VBACs	
		#	%[3,4]	#	%[3,5]	#	%[3,6]	#	%[7]
STATE TOTAL	82,216	17,190	21.0	11,383	15.5	5,807	67.3	2,823	32.7
Anna Jaques Hospital	856	173	20.2	122	15.7	51	64.6	28	35.4
Baystate Medical Center	5219	987	18.9	652	13.9	335	63.8	190	36.2
Berkshire Medical Center	859	152	17.7	93	12.4	59	55.1	48	44.9
Beth Israel Deaconess Medical Center	5182	1307	25.2	921	20.2	386	62.1	236	37.9
Beverly Hospital	2556	460	18.0	280	12.3	180	62.5	108	37.5
Boston Medical Center	1704	347	20.4	244	15.7	103	69.1	46	30.9
Boston Regional Medical Center	1181	298	25.2	176	17.2	122	76.3	38	23.8
Brigham and Women's Hospital	9395	2090	22.4	1451	17.3	639	65.6	335	34.4
Brockton Hospital	1062	188	17.7	115	12.1	73	64.0	41	36.0
Cambridge Birth Center	35	0	0.0	0	0.0	0	-	0	-
Cambridge Hospital	653	106	16.2	71	11.9	35	61.4	22	38.6
Cape Cod Hospital	1032	214	20.7	126	14.0	88	65.2	47	34.8
Caritas Good Samaritan Medical Center Cushing Campus	1250	289	23.1	184	16.7	105	70.0	45	30.0
Caritas Norwood Hospital	1022	237	23.2	140	16.1	97	62.6	58	37.4
Charlton Memorial Hospital	1617	301	18.6	184	12.5	117	82.4	25	17.6
Cooley-Dickinson Hospital	917	162	17.7	106	12.9	56	58.3	40	41.7
Deaconess/Waltham Hospital	306	49	16.0	30	10.9	19	61.3	12	38.7
Emerson Hospital	1413	289	20.5	189	15.2	100	59.5	68	40.5
Fairview Hospital	150	38	25.5	23	18.0	15	71.4	6	28.6
Falmouth Hospital	617	123	19.9	89	15.8	34	64.2	19	35.8
Franklin Medical Center	555	93	16.8	66	13.0	27	58.7	19	41.3
Hale Hospital	448	82	18.3	45	11.7	37	57.8	27	42.2
Harrington Memorial Hospital	461	92	20.0	53	13.3	39	63.9	22	36.1
Heywood Memorial Hospital	515	75	14.6	40	8.7	35	66.0	18	34.0
Holy Family Hospital and Medical Center	1195	282	23.6	200	18.6	82	67.2	40	32.8
Holyoke Hospital	480	90	18.8	50	11.6	40	80.0	10	20.0
Jordan Hospital	792	192	24.3	107	16.1	85	68.0	40	32.0
Lawrence General Hospital	1453	258	17.8	159	11.9	99	81.8	22	18.2
Leominster Hospital	1514	306	20.2	195	14.4	111	68.9	50	31.1
Lowell General Hospital	2231	434	19.5	260	13.2	174	67.7	83	32.3
Malden Hospital	41	6	15.4	3	8.8	3	60.0	2	40.0
Martha's Vineyard Hospital	111	16	14.4	13	12.9	3	30.0	7	70.0
Mary Lane Hospital	234	53	22.6	29	14.5	24	70.6	10	29.4

Table B-13A (cont'd). Cesarean Section Deliveries and Vaginal Births After Cesarean Section (VBACs) by Licensed Maternity Facility[1], Massachusetts: 1998

Facility	Occurrence Births[2]	Total C-Sections		Primary C-Section		Repeat C-Section		VBACs	
		#	%[3,4]	#	%[3,5]	#	%[3,6]	#	%[7]
Massachusetts General Hospital	2449	521	21.3	400	17.6	121	73.3	44	26.7
Melrose-Wakefield Hospital	1587	353	22.2	210	15.1	143	74.1	50	25.9
Mercy Hospital Center for Health	694	140	20.2	98	15.3	42	79.2	11	20.8
Metro West Medical Center - Framingham Union Campus	2527	515	20.4	382	16.2	133	77.8	38	22.2
Milford-Whitinsville Hospital	611	117	19.1	74	13.6	43	64.2	24	35.8
Morton Hospital	719	194	27.2	131	20.9	63	73.3	23	26.7
Mount Auburn Hospital	1227	221	18.0	171	15.1	50	54.9	41	45.1
Nantucket Cottage Hospital	73	8	11.0	4	6.1	4	57.1	3	42.9
New England Medical Center	1488	357	24.0	252	18.5	105	82.0	23	18.0
Newton Wellesley Hospital	3808	890	23.4	668	18.9	222	83.1	45	16.9
North Adams Regional Hospital	335	85	25.4	57	19.2	28	73.7	10	26.3
North Shore Birth Center	88	0	0.0	0	0.0	0	0.0	1	100.0
North Shore Medical Center	1741	395	22.7	244	15.7	151	81.2	35	18.8
Quincy Hospital	503	138	27.4	75	17.6	63	82.9	13	17.1
Saint Vincent Hospital	2047	349	17.0	247	13.5	102	48.1	110	51.9
Saints Memorial Medical Center	587	128	21.9	95	17.6	33	73.3	12	26.7
South Shore Hospital	3465	804	23.2	499	16.4	305	73.7	109	26.3
St. Elizabeth's Medical Center of Boston	1647	418	25.4	271	18.7	147	73.1	54	26.9
St. Luke's Hospital	1637	356	21.8	225	15.6	131	69.3	58	30.7
Sturdy Memorial Hospital	808	139	17.2	73	10.5	66	56.9	50	43.1
The Birthplace At Wellesley	66	0	0.0	0	0.0	0	0.0	3	100.0
Tobey Hospital	520	53	13.2	34	9.3	19	52.8	17	47.2
UMass Memorial Medical Center - West Campus	4130	780	18.9	493	13.5	287	60.3	189	39.7
Winchester Hospital	2135	440	20.8	264	14.3	176	65.4	93	34.6
All Other Hospitals	4	0	0.0	0	0.0	0	-	0	-
Home births, enroute, other	264	0	0.0	0	0.0	0	0.0	5	100.0

[1] A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. [2] See section definitions for explanation of occurrence and Cesarean births, primary and repeat. The percentages provided in this table are based on occurrence births and may differ from data presented elsewhere in this book which are based on resident births. [3] The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. [4] Percentages calculated on births with known method of delivery. Percentage of total Cesarean sections= (total Cesarean births/all births) x 100. [5] Percentage primary Cesarean sections=(primary cesarean sections/all births-repeat Cesarean sections-VBACs) x 100. [6] Percentage repeat Cesarean sections= (repeat Cesarean sections/(repeat Cesarean sections + VBACs)) x100. [7] Percentage VBACs= (VBAC deliveries/(repeat Cesarean sections + VBAC)) x 100.

Note: Malden Hospital closed to births on February 9, 1998. Quincy Hospital closed to births on November 1998. Name changes: Caritas Norwood Hospital from Norwood Hospital, UMASS Memorial Medical Center – West Campus from Memorial Hospital.

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
STATE TOTAL	**82,216**	**81,406**	**5,484**	**5,902**	**414**	**315**
Abington	0	208	10	13	1	1
Acton	0	245	14	1	1	1
Acushnet	0	105	7	7	2	1
Adams	0	83	5	4	1	1
Agawam	0	320	13	22	1	1
Alford	0	2	0	0	0	0
Amesbury	0	225	19	8	1	1
Amherst	2	163	7	8	1	1
Andover	0	352	20	5	0	0
Arlington	4	531	40	9	2	2
Ashburnham	0	56	–[1]	6	0	0
Ashby	0	30	–[1]	0	0	0
Ashfield	1	13	–[1]	0	0	0
Ashland	1	223	16	3	1	0
Athol	1	126	9	20	0	0
Attleboro	809	592	40	45	0	0
Auburn	1	147	8	4	0	0
Avon	0	47	5	2	0	0
Ayer	2	115	5	12	0	0
Barnstable	1,035	511	34	31	4	1
Barre	0	59	–[1]	2	0	0
Becket	1	16	0	0	0	0
Bedford	1	232	14	2	1	1
Belchertown	1	157	10	5	2	2
Bellingham	0	226	14	12	2	2
Belmont	0	286	12	1	1	1
Berkley	0	95	9	4	3	3
Berlin	0	27	–[1]	0	0	0
Bernardston	0	11	–[1]	0	0	0
Beverly	2,644	472	19	15	1	1
Billerica	0	553	23	21	0	0
Blackstone	0	117	8	9	1	1
Blandford	0	11	0	0	0	0
Bolton	0	64	9	1	0	0
Boston	21,908	7,883	694	836	46	34
Bourne	0	253	8	5	0	0
Boxborough	0	68	–[1]	1	1	0
Boxford	0	85	5	1	0	0
Boylston	0	56	–[1]	1	0	0
Braintree	0	386	20	10	1	0
Brewster	0	77	–[1]	2	0	0

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Bridgewater	0	295	26	10	2	2
Brimfield	1	38	–[1]	4	0	0
Brockton	2,313	1,453	147	180	14	13
Brookfield	1	26	5	4	0	0
Brookline	3	655	44	12	0	0
Buckland	0	17	–[1]	1	0	0
Burlington	1	333	20	11	2	1
Cambridge	1,920	1,034	76	31	2	1
Canton	0	239	15	1	3	3
Carlisle	0	52	–[1]	0	0	0
Carver	0	136	11	10	0	0
Charlemont	0	19	0	2	0	0
Charlton	1	144	15	9	3	3
Chatham	2	43	–[1]	2	0	0
Chelmsford	2	457	35	10	4	4
Chelsea	2	664	58	103	4	4
Cheshire	0	37	–[1]	2	1	0
Chester	0	16	–[1]	1	0	0
Chesterfield	0	8	0	1	0	0
Chicopee	1	612	43	72	7	6
Chilmark	3	9	0	0	0	0
Clarksburg	0	19	–[1]	2	0	0
Clinton	0	189	10	10	0	0
Cohasset	0	86	0	0	0	0
Colrain	0	22	6	2	2	2
Concord	1,414	161	7	3	1	1
Conway	1	21	0	0	0	0
Cummington	0	13	–[1]	0	0	0
Dalton	0	67	5	5	0	0
Danvers	0	246	18	8	0	0
Dartmouth	0	251	15	18	0	0
Dedham	1	314	19	7	2	2
Deerfield	0	53	–[1]	1	0	0
Dennis	0	130	13	13	0	0
Dighton	0	52	–[1]	2	1	0
Douglas	0	135	8	6	1	0
Dover	0	72	–[1]	0	0	0
Dracut	0	417	25	15	1	1
Dudley	0	121	14	4	1	1
Dunstable	0	35	–[1]	0	0	0
Duxbury	2	163	–[1]	1	1	1
East Bridgewater	0	192	19	9	1	1
East Brookfield	0	21	0	2	0	0
East Longmeadow	0	155	12	4	0	0
Eastham	0	26	–[1]	1	0	0

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Easthampton	1	185	13	11	0	0
Easton	0	272	19	4	0	0
Edgartown	0	42	5	0	0	0
Egremont	1	7	0	0	0	0
Erving	0	12	--[1]	0	0	0
Essex	0	34	--[1]	2	0	0
Everett	0	498	49	33	5	4
Fairhaven	0	166	11	13	1	1
Fall River	1,618	1,104	101	156	8	8
Falmouth	618	240	16	20	0	0
Fitchburg	6	554	39	90	1	0
Florida	0	10	--[1]	1	0	0
Foxborough	0	253	16	2	1	0
Framingham	2,528	984	82	46	2	2
Franklin	2	526	37	9	0	0
Freetown	0	63	--[1]	6	0	0
Gardner	515	233	21	29	0	0
Gay Head (Aquinnah)	0	2	0	1	0	0
Georgetown	0	121	--[1]	0	1	1
Gill	0	10	0	0	0	0
Gloucester	2	325	17	17	3	1
Goshen	0	13	--[1]	1	0	0
Gosnold	0	1	0	0	0	0
Grafton	1	229	17	5	4	4
Granby	0	66	6	4	0	0
Granville	0	24	0	1	0	0
Great Barrington	151	48	5	1	1	1
Greenfield	556	198	14	31	3	3
Groton	0	136	8	2	1	1
Groveland	0	74	--[1]	1	0	0
Hadley	1	31	--[1]	0	0	0
Halifax	0	98	6	4	0	0
Hamilton	0	107	--[1]	2	1	1
Hampden	0	53	5	1	0	0
Hancock	0	4	0	1	0	0
Hanover	0	156	7	3	0	0
Hanson	0	127	8	9	1	1
Hardwick	0	32	--[1]	2	1	1
Harvard	0	57	--[1]	0	0	0
Harwich	1	104	5	8	3	2
Hatfield	1	28	--[1]	1	0	0
Haverhill	448	845	50	82	5	3
Hawley	0	3	0	0	0	0
Heath	0	9	0	0	0	0
Hingham	1	252	7	3	2	1

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Hinsdale	1	19	--[1]	2	0	0
Holbrook	0	161	8	7	0	0
Holden	0	188	16	3	2	2
Holland	1	28	--[1]	3	0	0
Holliston	1	184	6	1	1	1
Holyoke	482	706	51	191	4	4
Hopedale	0	80	--[1]	3	0	0
Hopkinton	2	215	6	1	0	0
Hubbardston	1	53	0	2	0	0
Hudson	1	241	17	15	1	1
Hull	0	146	6	9	0	0
Huntington	0	22	--[1]	2	0	0
Ipswich	1	150	8	6	0	0
Kingston	0	195	7	5	0	0
Lakeville	1	111	5	5	2	0
Lancaster	1	75	6	4	2	2
Lanesborough	0	15	0	1	0	0
Lawrence	1,455	1,405	95	304	11	7
Lee	0	61	--[1]	1	0	0
Leicester	0	103	10	6	1	1
Lenox	2	41	--[1]	1	0	0
Leominster	1,516	637	39	49	5	5
Leverett	0	8	0	0	0	0
Lexington	1	293	13	3	0	0
Leyden	0	5	0	0	0	0
Lincoln	2	54	5	0	0	0
Littleton	1	117	7	3	0	0
Longmeadow	0	159	5	2	1	0
Lowell	2,825	1,686	155	245	8	5
Ludlow	0	185	16	10	0	0
Lunenburg	0	99	--[1]	3	0	0
Lynn	3	1,370	110	194	9	6
Lynnfield	0	116	11	1	1	1
Malden	42	764	62	26	7	5
Manchester-by-the-Sea	0	42	--[1]	0	1	1
Mansfield	0	413	20	8	2	2
Marblehead	0	250	12	0	1	0
Marion	0	52	--[1]	1	0	0
Marlborough	1	556	26	32	1	1
Marshfield	0	381	14	5	2	2
Mashpee	0	132	6	6	0	0
Mattapoisett	0	69	0	1	0	0
Maynard	0	140	6	7	4	3
Medfield	0	154	6	0	0	0
Medford	2	607	46	19	2	2

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Medway	0	189	16	2	1	0
Melrose	1,587	355	14	5	1	0
Mendon	0	60	0	0	0	0
Merrimac	0	86	8	2	0	0
Methuen	1,196	568	36	48	2	1
Middleborough	0	299	23	17	3	1
Middlefield	1	6	0	0	0	0
Middleton	1	82	--[1]	2	0	0
Milford	612	382	29	25	4	2
Millbury	1	148	12	10	4	1
Millis	1	128	8	2	1	0
Millville	0	44	--[1]	6	0	0
Milton	1	317	26	6	5	5
Monroe	0	1	0	0	0	0
Monson	0	95	5	11	0	0
Montague	0	98	6	12	0	0
Monterey	2	9	0	0	0	0
Montgomery	0	7	0	0	0	0
Mount Washington	0	3	0	0	0	0
Nahant	0	42	--[1]	1	0	0
Nantucket	76	125	6	5	2	2
Natick	1	482	29	8	1	1
Needham	0	373	21	2	0	0
New Ashford	0	2	0	0	0	0
New Bedford	1,639	1,314	90	224	8	4
New Braintree	0	9	0	0	0	0
New Marlborough	0	13	0	1	0	0
New Salem	0	2	0	0	0	0
Newbury	0	85	--[1]	0	0	0
Newburyport	856	204	8	11	0	0
Newton	3,812	856	42	7	1	0
Norfolk	0	151	--[1]	1	0	0
North Adams	336	171	10	22	0	0
North Andover	0	362	15	10	0	0
North Attleboro	0	381	26	14	3	3
North Brookfield	0	51	7	5	1	1
North Reading	0	192	17	2	2	2
Northampton	924	248	17	22	2	2
Northborough	0	191	9	7	1	0
Northbridge	0	187	7	15	0	0
Northfield	0	28	--[1]	1	0	0
Norton	0	274	14	9	0	0
Norwell	0	144	6	1	1	0
Norwood	1,022	334	19	5	2	2
Oak Bluffs	111	56	5	2	1	1

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Oakham	0	13	--[1]	0	0	0
Orange	0	76	5	12	0	0
Orleans	0	33	--[1]	0	0	0
Otis	0	10	0	2	0	0
Oxford	0	183	11	16	0	0
Palmer	1	148	14	7	1	1
Paxton	1	31	0	0	0	0
Peabody	1	564	30	19	4	3
Pelham	0	8	0	0	0	0
Pembroke	0	266	24	12	1	1
Pepperell	0	187	19	10	0	0
Peru	0	8	0	0	0	0
Petersham	0	14	--[1]	1	0	0
Phillipston	0	18	--[1]	2	0	0
Pittsfield	859	510	32	69	2	2
Plainfield	0	9	0	0	0	0
Plainville	0	99	11	3	1	1
Plymouth	792	663	31	38	3	2
Plympton	0	39	0	2	0	0
Princeton	2	43	--[1]	1	0	0
Provincetown	0	18	5	2	0	0
Quincy	508	1,111	59	47	2	2
Randolph	0	382	33	15	2	2
Raynham	0	153	15	7	0	0
Reading	1	329	18	1	2	2
Rehoboth	0	111	9	4	0	0
Revere	0	628	57	46	2	1
Richmond	2	10	--[1]	0	0	0
Rochester	0	42	--[1]	0	0	0
Rockland	0	246	20	17	2	1
Rockport	0	66	5	3	1	1
Rowe	0	3	0	0	0	0
Rowley	0	82	--[1]	0	0	0
Royalston	0	10	0	1	0	0
Russell	0	18	--[1]	1	0	0
Rutland	0	90	5	2	1	1
Salem	1,742	505	40	49	5	5
Salisbury	0	110	10	13	0	0
Sandisfield	0	14	--[1]	0	0	0
Sandwich	1	231	16	1	0	0
Saugus	0	288	22	13	2	1
Savoy	0	7	0	0	0	0
Scituate	1	224	13	1	0	0
Seekonk	0	117	5	9	0	0
Sharon	2	214	15	0	1	0

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Sheffield	1	28	0	1	0	0
Shelburne	1	26	--[1]	1	0	0
Sherborn	0	61	0	0	0	0
Shirley	0	69	--[1]	5	1	0
Shrewsbury	1	457	21	4	5	5
Shutesbury	0	21	0	0	0	0
Somerset	1	139	10	18	0	0
Somerville	2	941	63	60	3	2
South Hadley	0	166	10	9	0	0
Southampton	0	56	6	1	0	0
Southborough	1	143	8	4	1	1
Southbridge	463	260	23	46	4	4
Southwick	0	108	6	7	1	1
Spencer	0	151	13	13	0	0
Springfield	5,925	2,368	234	470	21	15
Sterling	1	96	8	2	0	0
Stockbridge	0	14	--[1]	1	0	0
Stoneham	1,182	301	21	5	0	0
Stoughton	1	314	26	18	0	0
Stow	0	93	6	2	2	1
Sturbridge	1	98	6	1	1	0
Sudbury	1	261	13	2	1	1
Sunderland	0	40	5	4	0	0
Sutton	0	108	5	4	0	0
Swampscott	0	162	12	2	0	0
Swansea	0	142	9	14	0	0
Taunton	722	821	68	72	6	5
Templeton	0	81	--[1]	5	0	0
Tewksbury	1	396	25	9	2	2
Tisbury	3	35	--[1]	1	0	0
Tolland	0	3	0	0	0	0
Topsfield	0	61	5	0	0	0
Townsend	0	133	7	7	1	0
Truro	0	14	--[1]	0	0	0
Tyngsborough	0	169	12	3	0	0
Tyringham	0	1	0	0	0	0
Upton	1	110	11	2	2	1
Uxbridge	0	169	6	6	0	0
Wakefield	0	317	13	3	1	1
Wales	0	21	--[1]	1	0	0
Walpole	1	297	16	3	0	0
Waltham	308	706	53	26	4	4
Ware	235	117	6	15	2	1
Wareham	521	239	14	27	1	0
Warren	0	51	--[1]	6	0	0

Table B-14A. Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 1998

Community	Occurrence Births	Resident Births	Low Birthweight	Teen Births, < 20 years	Infant Deaths	Neonatal Deaths
Warwick	0	8	0	0	0	0
Washington	0	5	--[1]	0	0	0
Watertown	2	394	20	6	0	0
Wayland	1	174	14	1	0	0
Webster	0	224	21	26	1	0
Wellesley	67	372	20	0	1	0
Wellfleet	0	21	--[1]	0	0	0
Wendell	0	13	0	1	0	0
Wenham	0	46	--[1]	0	1	1
West Boylston	0	66	--[1]	1	0	0
West Bridgewater	0	78	5	2	0	0
West Brookfield	0	37	--[1]	5	0	0
West Newbury	1	66	--[1]	0	0	0
West Springfield	0	337	22	34	1	0
West Stockbridge	0	10	--[1]	0	1	0
West Tisbury	0	17	--[1]	0	0	0
Westborough	0	248	13	5	3	3
Westfield	2	436	26	36	1	1
Westford	1	333	28	5	0	0
Westhampton	0	5	0	0	0	0
Westminster	0	74	8	9	0	0
Weston	0	122	--[1]	1	0	0
Westport	1	128	10	8	1	1
Westwood	0	176	8	1	0	0
Weymouth	3,470	696	50	27	4	3
Whately	0	15	--[1]	0	0	0
Whitman	0	188	10	11	0	0
Wilbraham	1	115	10	2	1	1
Williamsburg	0	21	0	1	0	0
Williamstown	0	45	--[1]	1	0	0
Wilmington	0	325	17	6	1	1
Winchendon	1	128	16	11	1	0
Winchester	2,139	291	13	0	0	0
Windsor	0	9	--[1]	0	0	0
Winthrop	0	196	10	3	0	0
Woburn	1	436	26	15	0	0
Worcester	6,186	2,417	188	338	17	15
Worthington	1	8	0	1	0	0
Wrentham	1	160	11	3	0	0
Yarmouth	0	217	15	17	4	4
Unknown	4	0	0	0	0	0

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[1] Values of 1-4 for medical characteristics of communities with less than 200 births are suppressed based on Guidelines For Release Of Birth Data, Bureau of Health Statistics, Research and Evaluation

Table B-14B. Birth Characteristics, Occurrence and Resident Births and Infant Deaths by County, Massachusetts: 1998

County Name	Occurrence Births	Resident Births			Deaths	
		Number	Low Birthweight	Teen (< 20 years)	Infant	Neonatal
STATE TOTAL	82,216	81,406	5,655	5,902	414	315
Barnstable	1,657	2,050	131	108	11	7
Berkshire	1,356	1,298	81	118	6	4
Bristol	4,790	6,693	482	642	35	28
Dukes	117	162	15	4	1	1
Essex	8,350	9,598	602	819	50	35
Franklin	559	732	50	68	5	5
Hampden	6,414	5,963	468	880	39	30
Hampshire	1,167	1330	83	82	7	6
Middlesex	17,790	19,170	1,261	742	72	55
Nantucket	76	125	6	5	2	2
Norfolk	5,080	8,432	528	197	29	22
Plymouth	3,631	6,462	430	396	37	27
Suffolk	21,910	9,371	819	988	52	39
Worcester	9,315	10,020	699	853	68	54

Table B-14C. Birth Characteristics, Occurrence and Resident Births and Infant Deaths, Massachusetts Community Health Network Areas (CHNAs): 1998

Community Health Network Area	Occurrence Births	Resident Births			Deaths	
		Number	Low Birthweight	Teen (< 20 years)	Infant	Neonatal
STATE TOTAL	82,216	81,406	5,655	5,902	414	315
Community Health Network of Berkshire	1,356	1,298	81	118	6	4
Upper Valley Health Web (Franklin County)	560	900	61	92	5	5
Partnership for Health in Hampshire County (Northampton)	1,167	1,308	81	80	7	6
The Community Health Connection (Springfield)	5,927	3,921	327	562	27	19
Greater Southbridge Community Health Network	468	1,454	121	145	11	9
Community Partners for Health (Milford)	615	2,333	145	99	11	6
Community Health Network of Greater Metro West (Framingham)	2,541	5,438	323	148	22	16
Community Wellness Coalition (Worcester)	6,191	3,842	278	372	33	28
Fitchburg/Gardner Community Health Network	2,045	3,339	228	264	14	10
Greater Lowell Community Health Network	2,829	4,046	306	308	15	12
Greater Lawrence Community Health Network	2,652	2,769	170	369	13	8
Greater Haverhill Community Health Network	1,305	1,983	115	118	7	5
Greater Beverly/Gloucester Community Health Network	2,647	1,303	61	45	8	6
North Shore Community Health Network	1,746	3,543	256	287	22	16
Greater Woburn/Concord/Littleton Community Health Network	3,560	2,607	141	45	7	5
North Suburban Health Alliance (Medford/Malden/Melrose)	2,814	3,363	240	94	20	16
Greater Cambridge/Somerville Community Health Network	1,928	3,186	211	107	8	6
West Suburban Health Network (Newton/Waltham)	4,188	2,991	168	44	8	6
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	21,913	10,026	863	1000	52	39
Blue Hills Community Health Alliance (Quincy)	5,005	4,531	269	125	23	18
Four (For) Communities (Holyoke)	485	1,977	139	312	12	11
Greater Brockton Community Health Network	2,314	3,208	275	256	18	17
South Shore Community Partners in Prevention (Plymouth)	794	2,470	132	106	10	8
Health & Education Response (Attleboro/Taunton)	1,532	3,419	236	196	20	14
Partners for a Healthier Community (Fall River)	1,620	1,513	130	196	9	9
Greater New Bedford Community Health Network	2,160	2,301	146	297	12	6
Cape and Islands Community Health Network	1,850	2,337	152	117	14	10

DEATHS

SECTION C

DEATHS

Massachusetts resident deaths increased from 1997 (54,634 deaths) to 1998 (55,204 deaths). However, the 1998 death rate of 8.8 per 1,000 population was equivalent to the 1997 death rate of 8.8. As with live births, Massachusetts resident deaths include all deaths to Massachusetts residents regardless of the state in which the deaths occurred. Most data presented in this section are resident data. Occurrence data are used only for medical examiner data.

DEATHS BY RACE/ETHNICITY

From 1997 to 1998, the number of deaths by race/ethnicity remained relatively constant with white non-Hispanic residents comprising 93.9% of total deaths in Massachusetts. Black non-Hispanic deaths totaled 3.3% of total deaths, Hispanic deaths 0.8%, Asian deaths 0.7%, other and unknown race deaths 1.3%.

Prior to 1989, only a race question was included on death certificates. A separate item on Hispanic origin was added to the death record beginning January 1, 1989. This item asks whether the decedent was of Hispanic origin. If answered affirmatively, then specific Hispanic origin (e.g., Puerto Rican, Dominican, Cuban, etc.) is requested.

DEATHS BY AGE

Persons 75 years of age or older accounted for 61.9% of all resident deaths. The percent of deaths to residents in this age group vary widely by sex and race/ethnicity.

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE NON-HISPANIC	46.43	53.57
	BLACK NON-HISPANIC	70.01	29.99
	HISPANIC	82.06	17.94
	ASIAN	59.05	40.95
	OTHER/UNKNOWN	79.31	20.69
	TOTAL	48.29	51.71
FEMALE	WHITE NON-HISPANIC	27.65	72.35
	BLACK NON-HISPANIC	57.40	42.60
	HISPANIC	71.75	28.25
	ASIAN	48.02	51.98
	OTHER/UNKNOWN	45.16	54.84
	TOTAL	29.30	70.70
TOTAL	WHITE NON-HISPANIC	36.28	63.72
	BLACK NON-HISPANIC	63.91	36.09
	HISPANIC	78.03	21.97
	ASIAN	53.64	43.36
	OTHER/UNKNOWN	61.67	38.33
	TOTAL	38.12	61.88

DEATHS BY PLACE OF OCCURRENCE

Between 1997 and 1998, there was little variation in the sites where deaths occurred. The data are presented below:

SITE	% OF DEATHS 1998	% OF DEATHS 1997
HOSPITAL	46.0	49.3
NURSING OR REST HOME	30.0	29.2
AT HOME	22.2	20.3
EN ROUTE TO HOSPITAL OR DEAD ON ARRIVAL	0.0	0.0
OTHER AND UNKNOWN[1]	1.8	1.2
TOTAL	100.0	100.0

DEATHS BY CAUSE

Cause of death statistics in this report are based on the Ninth Revision of the International Classification of Diseases (ICD-9). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME), developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-9 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

The leading causes of death differed markedly by race and ethnicity in 1998, as in previous years. Nine of the ten leading causes of death for whites were chronic conditions (e.g., heart disease, cancer, stroke, respiratory illness, and diabetes) which usually afflict older people. The leading causes of death for blacks included AIDS/HIV-related diseases, perinatal conditions, and homicide; which occur more frequently among younger people. For Asians, hypertension and suicide were among the top ten leading causes of death. For Hispanics, AIDS/HIV-related diseases, perinatal conditions, homicide and chronic liver disease were among the leading causes of death in 1998.

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[1] Other and Unknown includes prison or other institutions and all other places.

Leading Causes of Death by Race/ Ethnicity, 1998

White			Black			Hispanic[1]			Asian			Total		
Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%
Heart disease	15,390	29.2	Cancer	503	25.0	Cancer	193	20.9	Cancer	113	27.4	Heart disease	15,998	29.0
Cancer	13,164	25.0	Heart disease	500	24.8	Heart disease	151	16.3	Heart disease	92	22.3	Cancer	13,769	24.9
Stroke	3,187	6.0	Stroke	101	5.0	AIDS/HIV-related diseases	58	6.3	Stroke	31	7.5	Stroke	3,321	6.0
Pneumonia & Influenza	2,820	5.4	Diabetes	82	4.1	Diabetes	42	4.5	Pneumonia & Influenza	17	4.1	Pneumonia &	2,897	5.2
COPD[2]	2,473	4.7	Pneumonia & Influenza	56	2.8	Perinatal conditions	38	4.1	COPD[2]	16	3.9	Influenza COPD[2]	2,542	4.6
Diabetes	1,305	2.5	AIDS/HIV-related diseases	54	2.7	Stroke	37	4.0	Suicide	16	3.9	Diabetes	1,403	2.5
Nephritis	866	1.6	COPD	49	2.4	Chronic liver disease	30	3.2	Diabetes	14	3.4	Nephritis	919	1.7
Unintentional Injury[3]	802	1.5	Perinatal conditions	44	2.2	Homicide	29	3.1	Nephritis	10	2.4	Unintentional Injury[3]	844	1.5
Septicemia	739	1.4	Homicide	41	2.0	COPD	28	3.0	Unintentional Injury[3]	9	2.2	Septicemia	780	1.4
Other artery diseases	664	1.3	Nephritis	40	2.0	Unintentional injury	27	2.9	Hypertension	8	1.9	Other Artery Disease	692	1.3
All other causes	11,294	21.4	All other Causes	544	27.0	All other causes	633	31.5	All other causes	200	48.4	All other Causes	12,039	21.8
Total	52,704	100.0	Total	2,014	100.0	Total	924	100.0 99.8	Total	413	100.0	Total	55,204	100.0

[1] Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification.

[2] Chronic Obstructive Pulmonary Disease.

[3] Excludes Motor vehicle Injuries.

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The Ninth Revision of the International Classification of Diseases was developed before the identification of AIDS. Classification of this disease and related diseases has evolved since 1981. The deaths presented in Table C-11 and Table C-12 were coded using the most current schedule, developed in 1987. Therefore, comparison data prior to 1987 are not available.

In 1998, 231 Massachusetts residents died from AIDS and HIV-related illnesses. This represents a 4.5% decrease from 1997 and a 62.1% reduction from the 1996 values. The marked decline in the number of deaths from AIDS and HIV-related diseases from 1996 to 1998 is due in large part to improved treatment efforts that have resulted in increased longevity.

DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths certified by medical examiners decreased from 3,989 in 1997 to 3,931 in 1998. Of the deaths certified by medical examiners, 47.1% were reported as a result of natural causes. The percentage of deaths due to natural causes (i.e., non-injury related causes) certified by medical examiners varies somewhat by county, from a high of 62.5% in Franklin County to a low of 0.0% in Nantucket County (although this is based on a small number of deaths and should be interpreted with caution. Plymouth County had the greatest percentage of deaths (25.9%) that were referred to medical examiners, while the highest number of such deaths was in Middlesex County with 2,520 deaths (23.3%).

COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks--consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers--to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. (The city of Boston constitutes its own Community Health Network Area.) It is hoped that the Networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 1940 US population, the same as used by the National Center for Health Statistics. The result of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

INTERNATIONAL CLASSIFICATION OF DISEASES, NINTH REVISION

The International Classification of Disease (ICD) classifies mortality information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Ninth Revision, published in 1977, is used to code mortality data beginning with 1979.

MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produces the official population estimates and projections for the Department of Public Health.

OCCURRENCE DEATH

Occurrence deaths include all deaths that occur within the state, including deaths of non-residents. An interstate exchange agreement among the 50 states and Canada provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

RACE

For death records, race is provided by the death record informant (for example, spouse or next of kin).

RESIDENT DEATH

The death of a person whose usual place of residence or permanent address (as reported by the informant) is in one of the 351 cities or towns of Massachusetts, regardless of where the death took place. Unless otherwise noted, all data in this publication are resident data. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See Death Certificate.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100{,}000$
CAUSE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100{,}000$
CRUDE DEATH RATE	$\frac{\text{Number of Resident Deaths In A Year}}{\text{Total Population}} \times 100{,}000$

Figure C-1. Daily Death Statistics
Massachusetts: 1998

Every day in 1998, residents of Massachusetts experienced an average of the following:

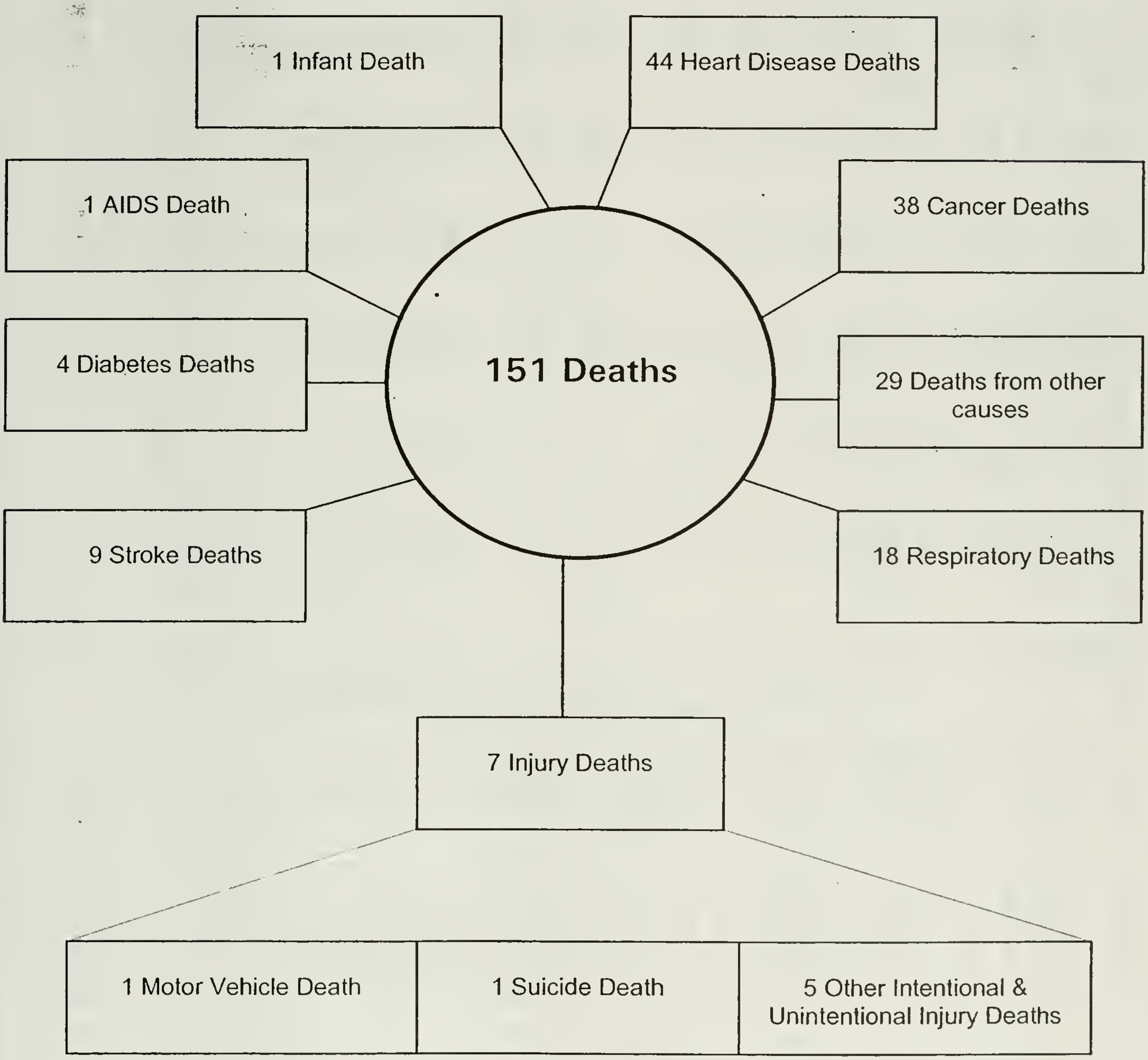
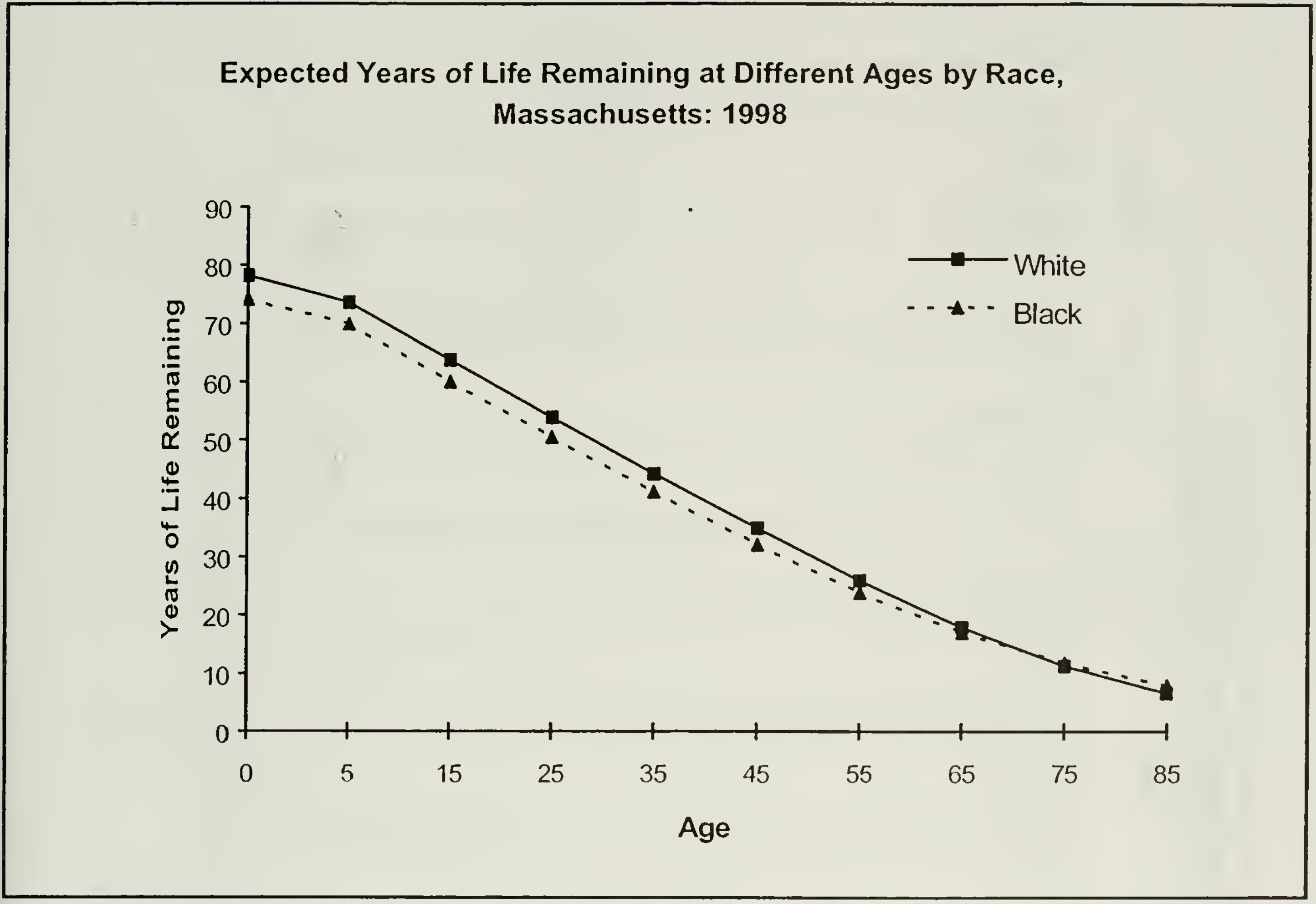


Table C-1. Trends in Mortality Characteristics Massachusetts: 1980, 1990 - 1998

Year		1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
Resident deaths[1]	Number	54,934	53,008	53,010	53,804	55,557	54,914	55,296	55,187	54,635	55,204
	Crude rate[2,3,4]	957.5	881.0	880.7	891.2	916.1	899.1	900.1	892.3	877.3	886.4
	Age-adjusted rate[5]	550.7	471.7	469.4	472.9	474.0	465.9	457.1	444.9	430.9	433.1
Race of decedent [6, 7]											
White	Number	53,251	50,719	50,756	51,477	53,123	52,414	52,661	52,674	52,097	52,704
	Percent	96.9	95.7	95.7	95.7	95.6	95.4	95.2	95.4	95.4	95.5
	Age-adjusted rate	549.1	463.6	463.6	467.1	467.7	459.6	449.1	439.3	425.0	428.4
Black	Number	1,508	1,939	1,945	2,007	2,027	2,126	2,194	2,070	2,081	2,014
	Percent	2.8	3.7	3.7	3.7	3.6	3.9	4.0	3.8	3.8	3.6
	Age-adjusted rate	932.6	645.3	624.1	650.2	645.3	660.0	677.4	623.3	622.5	605.1
Asian/Other	Number	141	342	308	320	397	372	440	434	447	476
	Percent	0.3	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9
Gender of decedent [7]											
Female	Number	27,563	27,490	27,550	27,770	29,109	28,733	29,262	29,152	29,261	29,568
	Age-adjusted rate	377.9	360.0	360.5	362.3	366.2	361.7	357.5	346.0	343.5	344.8
Male	Number	27,369	25,518	25,460	26,034	26,448	26,181	26,034	26,035	25,373	25,635
	Age-adjusted rate	663.6	618.5	612.2	616.9	612.7	598.7	583.2	571.2	543.5	547.1
Age of decedent [7]											
<1 year	Number	748	649	576	569	523	499	419	403	425	414
1-14 years	Number	297	205	207	225	239	192	204	197	174	128
15-24 years	Number	940	586	538	470	464	473	452	434	422	413
25-44 years	Number	2,117	2,682	2,912	3,062	3,055	3,210	3,196	2,720	2,348	2,373
45-64 years	Number	10,504	8,138	7,877	7,973	7,920	7,766	7,611	7,477	7,416	7,501
65-74 years	Number	12,411	11,707	11,415	11,515	11,509	11,394	10,858	10,711	10,286	10,216
75-84 years	Number	15,505	15,553	15,506	15,912	16,346	16,092	16,497	16,839	16,884	16,946
85+ years	Number	12,409	13,482	13,973	14,076	15,494	15,283	16,054	16,400	16,677	17,213

1. Deaths presented in all tables and figures are resident deaths unless otherwise specified. 2. Deaths per 100,000 residents. 3. See section definitions for further explanation of terms and rates 4. Rate calculations are based on resident population estimates from MISER for 1991-1995 (released in September 1999) and for 1996-1997 (released in November 1999). Residents death rates for 1998 are calculated using the 1997 MISER population estimates. **PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES.** 5. Rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. 6. See other tables for Hispanic data. Coding of race on the death certificate changed in 1989. Therefore, caution should be using when comparing current race categories with pre-1989 data. Race categories presented in this report for the years 1989-1998 have been updated and may differ slightly from previously published data. Please refer to the Technical Notes in the Appendix for a more detailed explanation. 7. Column sum may not equal total because the race, gender or age of some decedents was unknown.

Figure C-2



Expected Years of Life Remaining at Different Ages by Race, Massachusetts: 1998

Years of Life Remaining, Massachusetts: 1998

At Age:	All	Females	White Females	Black Females	Males	White Males	Black Males
Birth	78.1	80.6	80.6	77.2	75.3	75.4	70.8
1 year old	77.5	79.9	80.0	76.8	74.7	74.8	70.5
5 years old	73.5	76.0	76.0	72.9	70.8	70.9	66.6
15 years old	63.6	66.0	66.1	63.0	60.8	60.9	56.6
25 years old	53.8	56.1	56.2	53.2	51.2	51.3	47.4
35 years old	44.2	46.3	46.4	43.5	41.7	41.7	38.2
45 years old	34.8	36.8	36.9	34.5	32.4	32.5	29.3
55 years old	25.9	27.7	27.7	26.3	23.7	23.7	21.1
65 years old	18.0	19.4	19.4	18.9	16.0	16.0	14.6
75 years old	11.3	12.3	12.3	13.1	9.8	9.8	9.8
85 years old	6.6	7.0	7.0	8.3	5.7	5.7	7.1

Table C-2. Five Leading Causes of Death[1] Age-Adjusted Rates
Massachusetts and United States: 1980, 1985, 1990-1998

Year		Heart Disease[2]		Cancer		Stroke		Pneumonia/ Influenza		Unintentional Injuries		All Causes	
		MA	US	MA	US	MA	US	MA	US	MA	US	MA	US
1980	Rate[3]	197.7	202.0	136.6	132.8	34.2	40.8	16.7	12.9	30.4	42.3	550.7	585.8
	% of Total	39.9	38.2	22.2	20.9	7.9	8.6	4.0	2.7	3.9	5.3		
1985	Rate	178.7	180.5	140.2	133.6	27.3	32.3	14.7	13.4	25.2	34.7	523.7	546.1
	% of Total	37.9	37.2	23.5	22.0	6.8	7.3	4.0	3.2	3.4	4.5		
1990	Rate	138.2	150.3	136.7	133.0	22.5	27.6	14.2	13.5	19.4	32.7	471.7	515.1
	% of Total	33.4	33.5	25.3	23.4	6.2	6.7	4.3	3.6	2.9	4.3		
1991	Rate	133.9	146.1	140.1	132.6	21.6	26.5	14.4	12.6	17.7	31.7	469.4	507.9
	% of Total	32.2	33.2	26.0	23.8	6.2	6.6	4.5	3.5	2.7	4.2		
1992	Rate	131.9	144.5	143.7	133.2	21.5	26.1	13.8	12.7	15.5	29.2	472.9	504.9
	% of Total	31.7	33.1	26.3	23.9	6.2	6.6	4.5	3.5	2.4	4.0		
1993	Rate	132.0	145.3	140.1	132.6	21.3	26.5	15.9	13.5	15.9	30.3	474.0	513.3
	% of Total	31.7	32.6	25.2	23.4	6.1	6.6	5.0	3.6	2.4	3.9		
1994	Rate	125.1	140.4	138.0	131.5	21.0	26.5	15.0	13.0	14.9	30.3	465.9	507.4
	% of Total	30.8	32.1	25.3	23.4	6.1	6.7	4.8	3.6	2.4	4.0		
1995	Rate	119.2	138.3	137.3	129.9	21.0	26.7	15.0	12.9	13.6	30.5	457.1	503.9
	% of Total	30.2	31.8	25.4	23.3	6.3	6.8	4.9	3.6	2.2	4.0		
1996	Rate	118.5	134.6	133.3	129.9	20.2	26.5	14.8	12.6	13.6	30.1	444.9	492.5
	% of Total	30.4	31.6	25.2	23.4	6.1	6.9	5.1	3.6	2.3	4.0		
1997	Rate	114.5	130.5	129.0	125.6	20.2	25.9	14.1	12.9	14.0	30.1	430.9	479.1
	% of Total	30.2	31.3	25.0	23.2	6.2	6.9	4.9	3.8	2.3	4.0		
1998	Rate	110.2	126.0	130.2	122.9	19.3	25.0	14.6	13.5	14.9	28.5	433.1	470.7[4]
	% of Total	29.0	31.0	25.0	23.0	6.0	6.8	5.2	4.1	2.4	4.0		

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1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. International Classification of Diseases, Ninth Revision (ICD-9) codes used in this publication are listed in the Appendix. 3. All rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. **PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES FOR 1991-1995 (released by MISER SEPTEMBER 1999) and 1996-1997 (released by MISER In NOVEMBER 1999).** 4. The 1998 US data are derived from "Births and Deaths: Preliminary Data for 1998, National Vital Statistical Report," Vol. 47, No. 5, October 5, 1999, National Center for Health Statistics, Centers for Disease Control and Prevention, US Department of Health and Human Services.

Table C-3. Leading Causes of Death, Numbers and Age-Specific Rates, Massachusetts: 1998

Age	Cause of Death[1]	Deaths	
		Number	Rate[2]
1-14 years	**TOTAL**	**128**	**11.4**
	Unintentional injuries, excluding motor vehicle injuries[3]	27	2.4
	Cancer	19	1.7
	Congenital anomalies	11	1.0
	Motor vehicle-related injuries	11	1.0
15-24 years	**TOTAL**	**413**	**47.2**
	Motor vehicle-related injuries	123	14.1
	Suicide	66	7.5
	Homicide[4]	46	5.3
	Unintentional injuries, excluding motor vehicle injuries[3]	41	4.7
25-44 years	**TOTAL**	**2,373**	**116.3**
	Cancer	444	21.8
	Injuries of undetermined intent[5]	324	15.9
	Heart disease	299	14.7
	Suicide	218	10.7
45-64 years	**TOTAL**	**7,501**	**587.2**
	Cancer	3,023	236.6
	Heart disease	1,806	141.4
	Diabetes	244	19.1
	Chronic liver disease	240	18.8
65 + years[6]	**TOTAL**	**44,375**	**5,357.9**
	Heart disease	13,855	1,672.9
	Cancer	10,281	1,241.3
	Stroke	3,075	371.3
	Pneumonia and Influenza	2,750	332.0

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1. See page 116 for ICD-9 codes. 2. Number of deaths per 100,000 persons in each age group. 3. Unintentional injuries include injuries such as falls, fires, and drownings that were not intended to occur. Motor vehicle-related injuries are not included in these numbers. 4. The NCHS categories for 72 selected causes of death combines Homicide (ICD-9 E960-969) and Legal Intervention (ICD-9 E970-978). There were no deaths due to legal intervention in 1998. 5. Injuries of undetermined intent include deaths from drug overdoses, falls and fires where the investigation has not determined whether the injuries were accidental or purposely inflicted. 6. See Table C-3b for the leading causes of death for the 65+ year age group.

Table C-3b. Leading Causes of Death Among the Oldest Age Groups, Numbers and Age-Specific Rates, Massachusetts: 1998

Age	Cause of Death[1]	Deaths Number	 Rate[2]
65-74 years	**TOTAL**	**10,216**	**2,376.6**
	Cancer	3,782	879.8
	Heart disease	2,711	630.7
	COPD[3]	637	148.2
	Stroke	419	97.5
75-84 years	**TOTAL**	**16,946**	**5,964.6**
	Heart disease	5,084	1,789.4
	Cancer	4,355	1,532.9
	Stroke	1,164	409.7
	COPD[3]	985	346.7
85+ years	**TOTAL**	**17,213**	**15,065.0**
	Heart disease	6,060	5,303.8
	Cancer	2,144	1,876.5
	Pneumonia and Influenza	1,613	1,411.7
	Stroke	1,492	1,305.8

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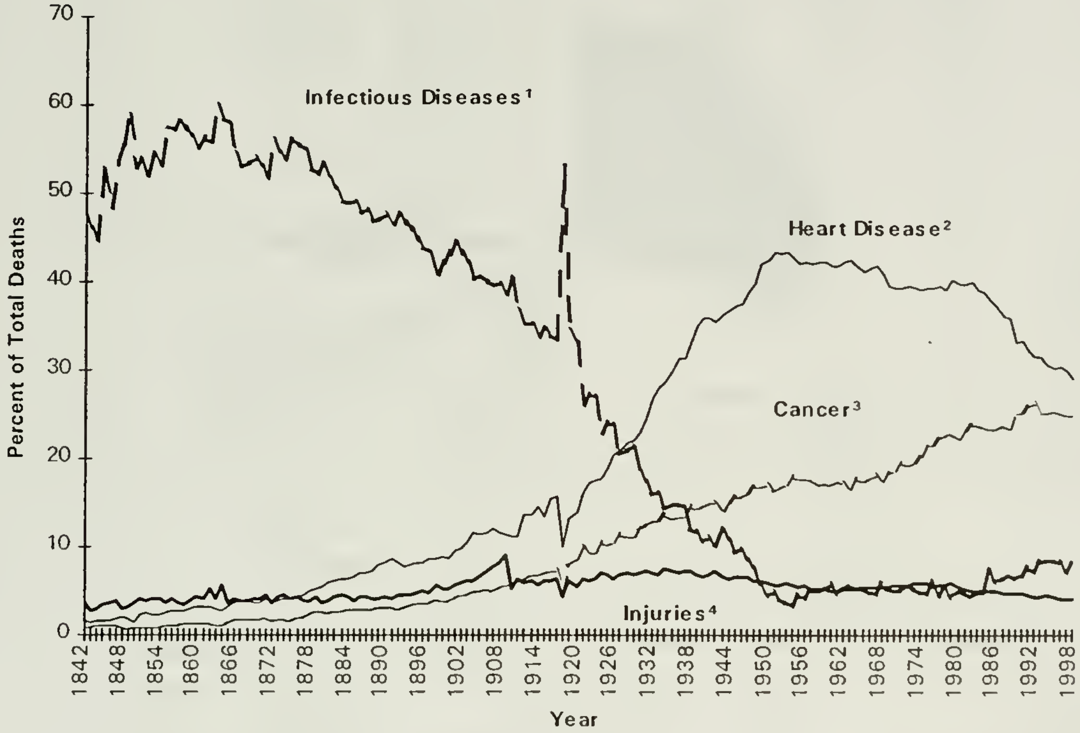
1. See page 117 for ICD-9 codes. 2. Number of deaths per 100,000 persons in each age group. 3. COPD: Chronic Obstructive Pulmonary Disease

Figure C-3

Trends in Deaths from Selected Causes, Massachusetts: 1842-1998



1 The category of infectious disease includes Infectious and Parasitic Diseases, ICD-9 codes 001-139, and Pneumonia and Influenza, ICD-9 codes 480-487
2 Heart Disease, ICD-9 codes 390-398, 402, 404-429
3 Cancer, ICD-9 codes 140-208
4 Injuries, ICD-9 codes E800-E999

Table C-4. Leading Causes of Death[1] and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 1998

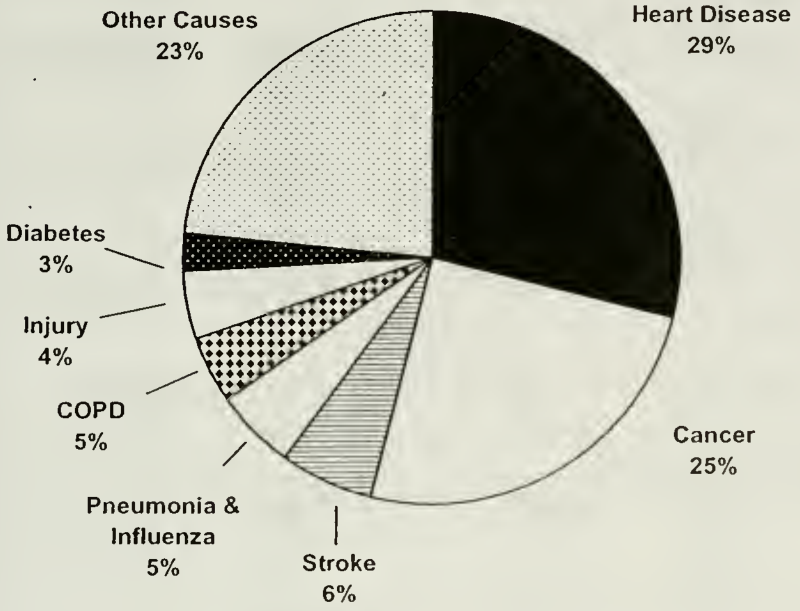
White			Black			Asian		
Cause	#	Rate[2]	Cause	#	Rate	Cause	#	Rate
Total	**52,704**	**428.4**	**Total**	**2,014**	**605.1**	**Total**	**413**	**258.7**
Heart disease	15,390	109.4	Cancer	503	168.0	Cancer	113	75.9
Cancer	13,164	129.5	Heart disease	500	147.8	Heart disease	92	58.3
Stroke	3,187	19.0	Stroke	101	28.8	Stroke	31	19.2
Pneumonia/ influenza	2,820	14.7	Diabetes	82	25.6	Pneumonia/ influenza	17	7.2
COPD[3]	2,473	19.4	Pneumonia/ influenza	56	14.4	COPD[3]	16	11.0
Diabetes	1,305	11.7	AIDS/HIV-related	54	16.0	Suicide	16	9.0
Nephritis	866	6.0	COPD[3]	49	14.6	Diabetes	14	9.8
Unintentional injury, excl. motor vehicle	802	7.6	Perinatal conditions	44	9.5	Nephritis	10	6.2
Septicemia	739	5.4	Homicide[4]	41	12.1	Unintentional injury excl. motor vehicle	9	5.8
Other arterial disease	664	4.7	Nephritis	40	11.7	Hypertension	8	5.3

Hispanic[5]			Total		
Cause	#	Rate	Cause	#	Rate
Total	**924**	**342.4**	**Total**	**55,204**	**433.1**
Cancer	193	84.9	Heart disease	15,998	110.2
Heart disease	151	61.3	Cancer	13,796	130.2
AIDS/HIV-related	58	17.4	Stroke	3,321	19.3
Diabetes	42	17.6	Pneumonia/ Influenza	2,897	14.6
Perinatal conditions	38	6.9	COPD[3]	2,542	19.1
Stroke	37	13.8	Diabetes	1,403	12.1
Chronic liver disease	30	14.1	Nephritis	919	6.2
Homicide[4]	29	8.5	Unintentional injury excl. motor vehicle	844	7.7
COPD[3]	28	10.6	Septicemia	780	5.6
Unintentional injury, excl. motor vehicle	27	8.4	Other artery disease	692	4.7

1. Ranking based on number of deaths. 2. All rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. 3. Chronic Obstructive Pulmonary Disease. 4. The NCHS categories for 72 selected causes of death combines Homicide (ICD-9 E960-969) and Legal Intervention (ICD-9 E970-978). There were no deaths due to legal intervention in 1998. 5. Persons of Hispanic ethnicity are also included in the race categories, consistent with the NCHS and US Census population classification.

Figure C-4

Percentage Distribution of Leading Causes of Death[1]
Massachusetts: 1998



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[1] Total Number of Deaths = 55,204

Table C-5. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 1998

Selected Causes	Total		White		Black		Asian		Hispanic[1]	
	#	Rate[2]	#	Rate	#	Rate	#	Rate	#	Rate
Age: 1-14, TOTAL	**128**	**11.4**	**103**	**10.3**	**19**	**22.0**	**6**	**14.8**	**16**	**15.8**
Unintentional injuries, excluding motor vehicle injuries[3]	27	2.4	22	2.2	5	5.8	0	0.0	5	4.9
Cancer	19	1.7	16	1.6	1	--[4]	2	--[4]	3	--[4]
Congenital Anomalies	11	1.0	9	0.9	1	--[4]	1	--[4]	2	--[4]
Motor vehicle-related injuries	11	1.0	10	1.0	1	--[4]	0	0.0	2	--[4]
Age: 15-24, TOTAL	**413**	**47.2**	**354**	**45.1**	**51**	**91.3**	**6**	**19.4**	**47**	**78.4**
Motor vehicle-related injuries	123	14.1	112	14.3	10	17.9	0	0.0	7	11.7
Suicide	66	7.5	61	7.8	2	--[4]	3	--[4]	4	--[4]
Homicide[5]	46	5.3	28	3.6	18	32.2	0	0.0	17	28.3
Unintentional injuries, excluding motor vehicle injuries[3]	41	4.7	36	4.6	5	9.0	0	0.0	5	8.3
Age: 25-44, TOTAL	**2,373**	**116.3**	**2,108**	**113.6**	**226**	**200.1**	**33**	**49.4**	**214**	**184.9**
Cancer	444	21.8	403	21.7	27	23.9	13	19.5	26	22.5
Injuries of undetermined Intent[6]	324	15.9	307	16.6	15	13.3	1	--[4]	34	29.4
Heart Disease	299	14.7	261	14.1	32	28.3	5	7.5	17	14.7
Suicide	218	10.7	201	10.8	9	8.0	7	10.5	8	6.9
Age: 45-64, TOTAL	**7,501**	**587.2**	**6,885**	**575.5**	**502**	**989.2**	**91**	**332.1**	**259**	**623.0**
Cancer	3,023	236.6	2,793	233.4	183	360.6	40	146.0	68	163.6
Heart Disease	1,806	141.4	1,652	138.1	132	260.1	16	58.4	51	122.7
Diabetes	244	19.1	214	17.9	27	53.2	2	--[4]	19	45.7
Chronic Liver Disease	240	18.8	228	19.1	9	17.7	2	--[4]	22	52.9
Age: 65+, TOTAL	**44,375**	**5,357.9**	**42,915**	**5,390.1**	**1,151**	**5,262.2**	**267**	**2,990.9**	**330**	**2,145.1**
Heart Disease	13,855	1,672.9	13,444	1,688.6	331	1,513.3	71	795.3	80	520.0
Cancer	10,281	1,241.3	9,928	1,247.0	289	1,321.3	56	627.3	95	617.5
Stroke	3,075	371.3	2,974	373.5	77	352.0	22	246.4	23	149.5
Pneumonia/Influenza	2,750	332.0	2,683	337.0	47	214.9	16	179.2	19	123.5

1. Persons of Hispanic ethnicity are also included in the race categories, consistent with the NCHS and US Census population classification. 2. Number of deaths per 100,000 persons in each age group. 3. Unintentional injuries include injuries such as falls, fires, and drownings that were not intended to occur. Motor vehicle-related injuries are not included in this category. 4. Calculations based on fewer than five events are excluded. 5. The NCHS categories for 72 selected causes of death combines Homicide (ICD-9 E960-969) and Legal Intervention (ICD-9 E970-978). There were no deaths due to legal intervention in 1998. 6. Injuries of undetermined intent include deaths from falls, fires, drownings, and drug overdoses, where the investigation has not determined whether the injuries were accidental or purposely inflicted.

Table C-6. Heart Disease and Cancer Deaths by Race and Gender, Age-Adjusted Rates,[1] Massachusetts: 1980, 1985, 1990, 1995-1998

Heart Disease

	White			Black		
Year	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
1980[2]	282.3	135.5	197.6	279.2	157.0	209.7
1985[2]	252.7	119.6	176.5	250.1	150.4	193.0
1990[3]	192.5	96.2	137.8	226.2	120.8	164.0
1995[3,4]	164.5	84.3	119.5	176.8	117.0	142.9
1996[3,4]	163.4	84.0	118.8	185.3	104.4	139.6
1997[3,4]	155.2	82.2	114.2	194.2	106.9	145.4
1998	149.8	78.1	109.4	183.6	123.4	147.8

Cancer

	White			Black		
Year	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
1980[2]	169.0	117.4	137.2	223.3	120.0	162.3
1985[2]	169.8	120.6	139.6	198.3	115.0	150.0
1990[3]	166.5	117.1	136.8	197.0	124.5	153.1
1995[3,4]	163.8	118.0	136.6	222.4	137.5	172.3
1996[3,4]	160.9	113.9	133.0	206.1	132.7	163.7
1997[3,4]	151.9	113.4	128.9	214.2	132.0	165.0
1998	155.6	111.7	129.5	218.8	133.7	168.0

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1. All rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. Rates for 1980 and 1985 were obtained through CDC WONDER using the Compressed Mortality File (CMF). 2. Coding of race on the death certificate changed in 1989. Therefore caution should be used when comparing current race categories with pre-1989 data. 3. Race categories presented in this report for 1989-1998 have been updated and may differ slightly from previously published data. 4. Differences between these rates and previously published data reflect updates in population estimates for 1991-1995 (released by MISER in September 1999) and 1996-1997 (released by MISER in November 1999).

Table C-7. Number and Age-Adjusted Rates of Cancer Deaths by Selected Causes and Gender, Massachusetts: 1998

Cause of Death[1]	ICD-9 Code	Total #	Total Rate[2,3]	Female #	Female Rate	Male #	Male Rate
Total Cancer Deaths	**140-208**	**13,796**	**130.2**	**6,894**	**112.1**	**6,902**	**156.6**
Bladder	188	320	2.3	107	1.1	213	4.1
Brain and nervous system	191,192	310	3.6	140	2.8	170	4.5
Cervix	180	91	2.0	91	2.0	-	-
Colorectal	153,154, 159.0	1,618	13.4	832	11.0	786	16.8
Esophagus	150	356	3.7	100	1.4	256	6.4
Female breast	174	1,096	19.7	1,096	19.7	-	-
Hodgkin's disease	201	36	0.4	16	0.3	20	0.5
Kidney and other urinary organs	189	278	2.7	107	1.8	171	4.0
Leukemia	202.4, 204-208	454	4.1	207	3.1	247	5.5
Lung	162	3,699	37.9	1,664	30.3	2,035	48.4
Melanoma of the skin	172	204	2.2	76	1.4	128	3.2
Multiple myeloma	203	227	2.1	124	2.0	103	2.3
Non-Hodgkin's lymphoma	200,202 (except 202.4)	598	5.4	288	4.1	310	7.1
Ovary	183	301	5.3	301	5.3	-	-
Pancreas	157	749	6.9	414	6.1	335	7.8
Prostate	185	763	13.5	-	-	763	13.5
Stomach	151	369	3.2	161	2.1	208	4.7
Uterus	179,182	155	2.4	155	2.4	-	-
All other cancers	Residual	2,172	20.8	1,015	15.3	1,157	27.7

1. Common terms are used to describe the causes of cancer deaths. For detailed terminology of cancer sites, please refer to ICD-9 code list on page 116. All rates are age-adjusted by the direct method using the 1940 US Census population. Rates are per 100,000 population. PLEASE NOTE: These rates cannot be compared to cancer mortality rates published by the Massachusetts Cancer Registry (MCR) because MCR uses the 1970 US Census population as the standard for age-adjustment, consistent with SEER (Surveillance, Epidemiology, End Results) 3. The total resident population is used to calculate all "Total Rates" except for ICD-9 174 to 183, which are based on the total female population, and ICD-9 185, which is based on the total male population.

Table C-8. Selected Causes of Cancer Deaths by Age, Massachusetts: 1998

Age	Cause of death[1]	ICD-9 Code	Number	Age-specific rate[2]
1 - 14	TOTAL		19	1.7
	Leukemia	202.4, 204-208	6	0.5
	Brain and nervous system	191,192	5	0.4
	Non-Hodgkin's lymphoma	200,202 (except 202.4)	1	–[3]
	Kidney and other urinary organs	189	0	0.0
15 - 24	TOTAL		26	3.0
	Leukemia	202.4, 204-208	6	0.7
	Melanoma of the skin	172	2	–[3]
	Brain and nervous system	191, 192	2	–[3]
	Non-Hodgkin's lymphoma	200,202 (except 202.4)	1	–[3]
	Lung	162	1	–[3]
25 - 44	TOTAL		444	21.8
	Female breast	174	74	7.2[4]
	Lung	162	71	3.5
	Colorectal	153-154, 159.0	37	1.8
	Brain and nervous system	191,192	32	1.6
45 - 64	TOTAL		3,023	236.6
	Lung	162	945	74.0
	Female breast	174	309	46.8[4]
	Colorectal	153-154, 159.0	266	20.8
	Pancreas	157	159	12.4
65 +	TOTAL		10,281	1,241.3
	Lung	162	2,682	323.8
	Colorectal	153-154, 159.0	1,315	158.8
	Female breast	174	713	141.3[4]
	Prostate	185	713	220.3[5]
65-74	TOTAL		3,782	879.8
	Lung	162	1,241	288.7
	Colorectal	153-154, 159.0	383	89.1
	Female Breast	174	245	101.6[4]
	Pancreas	185	223	51.9
75-84	TOTAL		4,355	1,532.9
	Lung	162	1,123	395.3
	Colorectal	153-154,159.0	552	194.3
	Prostate	185	338	321.0[5]
	Female Breast	174	281	157.2[4]
85+	TOTAL		2,144	1,876.5
	Colorectal	153-154,159.0	380	332.6
	Lung	162	318	278.3
	Prostate	185	208	703.7[5]
	Female Breast	174	187	220.8[4]

1. Common terms are used to describe causes of cancer death. For detailed terminology, please refer to the ICD-9 codes listed on page 116.
2. Number of deaths per 100,000 residents in each age group. 3. Calculations based on fewer than five events are excluded. 4. Calculation based on female population in specified age group. 5. Calculation based on male population in specified age group.

Table C-9. Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race & Hispanic Ethnicity, Massachusetts: 1998

	White			Black			Asian			Hispanic[1]	
Cause[2]	#	Rate[3]	Cause	#	Rate	Cause	#	Rate	Cause	#	Rate
Lung	3,555	38.1	Lung	116	41.1	Lung	22	16.0	Lung	36	17.7
Colorectal	1,538	13.2	Colorectal	63	20.6	Colorectal	14	9.0	Colorectal	20	9.2
Female breast	1,038	19.5	Female breast	43	25.6	Female breast	14	18.2	Leukemia	13	5.4
Prostate	718	13.1	Prostate	41	31.3	Stomach	7	4.3	Prostate	12	12.4
Total Cancer	**13,164**	**129.5**	**Total Cancer**	**503**	**168.0**	**Total cancer**	**113**	**75.9**	**Total Cancer**	**193**	**84.9**

1. Persons of Hispanic ethnicity are also included in the race categories, consistent with the NCHS and US Census population classification. 2. Common names are given for cancer causes of death. The following is a list of ICD-9 codes for cancer sites that appear in this table: Lung (162), Colorectal (153,154, 159.0), Female Breast (174), Prostate (185), Stomach (151), Leukemia (202.4, 204-208). Please refer to the ICD-9 codes listing in the Appendix for detailed terminology 3. All rates are age-adjusted by the direct method using the 1940 US Census population. Rates are per 100,000 population. PLEASE NOTE: These data are not directly comparable with cancer mortality rates published by the Massachusetts Cancer Registry (MCR). MCR uses the 1970 US population as the standard for age-adjustment, consistent with SEER (Surveillance, Epidemiology, End Results).

Table C-10. Injury Deaths by Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 1998

Cause of Death	All Injuries		Motor Vehicle[1]		Suicide		Homicide[2]		Other Injuries[3]	
(ICD-9 Code)	(E800-E999)		(E810-E825)		(E950-E959)		(E960-E969)		(E800-E809, E826-E949, E970-E999)	
Age/Gender	#[4]	Rate[5]	#	Rate	#	Rate	#	Rate	#	Rate
All Persons	2,413	31.1	484	7.3	503	7.3	123	2.1	1,303	14.4
<1[6]	18	--[6]	3	--[6]	0	0.0	2	--[6]	13	--[6]
1-14	51	4.5	11	1.0	7	0.6	4	--[7]	29	2.6
15-24	304	34.8	123	14.1	66	7.5	46	5.3	69	7.9
25-44	832	40.8	145	7.1	218	10.7	51	2.5	418	20.5
45-64	439	34.4	97	7.6	129	10.1	14	1.1	199	15.6
65+	769	92.8	105	12.7	83	10.0	6	0.7	575	69.4
65-74	183	42.6	35	8.1	35	8.1	3	--[7]	110	25.6
75-84	271	95.4	48	16.9	32	11.3	2	--[7]	189	66.5
85+	315	275.7	22	19.3	16	14.0	1	--[7]	276	241.6
All Females	**809**	**16.1**	**166**	**4.4**	**112**	**3.0**	**20**	**0.6**	**511**	**8.1**
<1	8	--[6]	2	--[6]	0	0.0	1	--[6]	5	--[6]
1-14	15	2.7	3	--[7]	1	--[7]	1	--[7]	10	1.8
15-24	62	14.2	35	8.0	9	2.1	3	--[7]	15	3.4
25-44	200	19.5	40	3.9	47	4.6	11	1.1	102	9.9
45-64	113	17.1	31	4.7	32	4.8	1	--[7]	49	7.4
65+	411	81.5	55	10.9	23	4.6	3	--[7]	330	65.4
65-74	78	32.4	17	7.1	11	4.6	1	--[7]	49	20.3
75-84	129	72.1	28	15.7	8	4.5	2	--[7]	91	50.9
85+	204	240.9	10	11.8	4	--[7]	0	0.0	190	224.3
All Males	**1,604**	**47.0**	**318**	**10.2**	**391**	**11.9**	**103**	**3.6**	**792**	**21.3**
<1	10	--[6]	1	--[6]	0	0.0	1	--[6]	8	--[6]
1-14	36	6.2	8	1.4	6	1.0	3	--[7]	19	3.3
15-24	242	55.3	88	20.1	57	13.0	43	9.8	54	12.3
25-44	632	62.4	105	10.4	171	16.9	40	4.0	316	31.2
45-64	326	52.8	66	10.7	97	15.7	13	2.1	150	24.3
65+	358	110.6	50	15.4	60	18.5	3	--[7]	245	75.7
65-74	105	55.6	18	9.5	24	12.7	2	--[7]	61	32.3
75-84	142	134.9	20	19.0	24	22.8	0	0.0	98	93.1
85+	111	375.5	12	40.6	12	40.6	1	--[7]	86	291.0

1. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 2. The NCHS categories for 72 selected causes of death combines Homicide (ICD-9 960-969) and Legal Intervention (ICD-9 970-978). There were no deaths caused by legal intervention in 1998. 3. Other Injuries include deaths such as drownings, fires, falls and drug overdoses. This category includes deaths from unintentional injuries and injuries of undetermined intent (deaths where investigation has not determined whether the injuries were accidental or purposely inflicted). 4. Column sum may not equal total because age or race of some decedents was not known. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted. 6. The denominator usually used in this age group is the number of 1998 resident births; since these data are not yet available, no rates for this age group are presented. 7. Calculations based on fewer than five events are excluded. 8. Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification.

Table C-10. (continued) Injury Deaths by Gender, Age, Race and Hispanic Ethnicity: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 1998

Cause of Death	All Injuries		Motor Vehicle[1]		Suicide		Homicide[2]		Other Injuries[3]	
(ICD-9 Code)	(E800-E999)		(E810-E825)		(E950-E959)		(E960-E969)		(E800-E809, E826-E949, E970-E999)	
Race/Gender	#[4]	Rate[5]	#	Rate	#	Rate	#	Rate	#	Rate
All Whites	**2,240**	**30.9**	**451**	**7.4**	**470**	**7.4**	**81**	**1.5**	**1238**	**14.6**
Females	766	16.2	154	4.4	105	3.1	16	0.5	491	8.2
Males	1,474	46.5	297	10.4	365	12.0	65	2.5	747	21.6
All Blacks	**137**	**40.1**	**28**	**8.7**	**16**	**4.8**	**41**	**12.1**	**52**	**14.6**
Females	32	16.9	11	6.6	3	--[7]	4	--[7]	14	6.2
Males	105	65.2	17	10.7	13	8.2	37	22.3	38	24.0
All Asians	**30**	**17.6**	**3**	**--[7]**	**16**	**9.0**	**1**	**--[7]**	**10**	**6.2**
Females	11	11.7	1	--[7]	4	--[7]	0	0.0	6	6.3
Males	19	23.6	2	--[7]	12	14.7	1	--[7]	4	--[7]
All Hispanics[8]	**140**	**41.8**	**23**	**7.0**	**14**	**4.2**	**29**	**8.5**	**74**	**22.0**
Females	24	13.0	5	2.3	0	0.0	4	--[7]	15	8.5
Males	116	72.0	18	11.8	14	8.5	25	15.0	59	36.6

1. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 2. The NCHS categories for 72 selected causes of death combines Homicide (ICD-9 960-969) and Legal Intervention (ICD-9 970-978). There were no deaths caused by legal intervention in 1998. 3. Other Injuries include deaths such as drownings, fires, falls and drug overdoses. This category includes deaths from unintentional injuries and injuries of undetermined intent (deaths where investigation has not determined whether the injuries were accidental or purposely inflicted). 4. Column sum may not equal total because age or race of some decedents was not known 5. Number of deaths per 100,000 persons age-adjusted. 7. Calculations based on fewer than five events are excluded. 8. Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification.

Table C-11. AIDS/HIV-Related Deaths[1] by Gender and Race/Ethnicity, Massachusetts: 1987-1998

Year[2]		Total	Place of Occurrence				Gender	
			At Home	Hospital	Out of State	Hospice/ Nursing Home/Other	Female	Male
1987	#	241	26	207	5	3	32	209
	%	100.0	10.8	85.9	2.1	-	13.3	86.7
1988	#	315	67	234	7	7	34	281
	%	100.0	21.3	74.3	2.2	2.2	10.8	89.2
1989	#	404	79	313	7	5	45	359
	%	100.0	19.6	77.5	1.7	1.2	11.1	88.9
1990	#	447	90	284	9	64	57	390
	%	100.0	20.1	63.5	2.1	14.3	12.8	87.2
1991	#	632	159	338	4	131	97	535
	%	100.0	25.2	53.5	-	20.7	15.4	84.6
1992	#	701	171	394	14	122	96	605
	%	100.0	24.4	56.2	2.0	17.4	13.7	86.3
1993	#	777	218	413	14	127	114	663
	%	100%	28.1	53.2	1.8	16.3	14.7	85.3
1994	#	938	265	514	13	142	175	763
	%	100%	28.3	54.8	1.4	15.1	18.7	81.3
1995	#	937	303	500	7	127	184	753
	%	100%	32.3	53.4	0.7	13.6	19.6	80.4
1996	#	609	154	336	9	110	115	494
	%	100%	25.3	55.2	1.5	18.1	18.9	81.1
1997	#	242	59	158	4	21	52	190
	%	100%	24.4	65.3	-	8.6	21.5	78.5
1998	#	213	46	130	2	35	44	169
	%	100%	21.6	61.0	-	16.4	20.7	79.3

1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. ICD Codes: AIDS-042, AIDS-like syndrome-043 and Other HIV infection-044. 2. The deaths presented were coded by using the most current ICD-9 classification schedule, which began with 1987 death data. 3. The "Other" category represents Asians and American Indians. 4. Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification.

Table C-11. (continued) AIDS/HIV-Related Deaths[1] by Gender and Race/Ethnicity, Massachusetts: 1987-1998

		Age					Race/Ethnicity			
Year[2]		<15	15-24	25-34	35-44	45 +	White	Black	Other[3]	Hispanic[4]
1987	#	5	8	105	78	45	190	50	1	NA
	%	2.1	3.3	43.6	32.3	18.7	78.8	20.8	-	
1988	#	5	12	111	127	60	251	64	0	NA
	%	1.6	3.8	35.2	40.3	19.1	79.7	20.3	0.0	
1989	#	3	16	146	167	72	326	77	1	37
	%	-	4.0	36.1	41.3	17.8	80.7	19.1	-	9.2
1990	#	3	4	147	197	96	347	98	0	50
	%	-	-	32.8	44.1	21.5	77.6	21.9	0.0	11.2
1991	#	9	19	214	298	92	509	122	1	74
	%	1.4	3.0	33.8	47.2	14.6	80.5	19.3	-	11.7
1992	#	6	5	243	304	143	552	147	2	95
	%	0.8	0.7	34.7	43.4	20.4	78.7	21.0	-	13.6
1993	#	10	5	234	359	169	605	167	5	94
	%	1.3	0.6	30.1	46.2	21.8	77.9	21.5	0.6	12.1
1994	#	7	8	272	464	187	732	198	8	157
	%	0.7	0.9	29.0	49.5	19.9	78.0	21.1	0.9	16.7
1995	#	11	5	272	443	206	701	232	5	155
	%	1.2	0.5	29.0	47.3	22.0	74.8	24.8	0.5	16.5
1996	#	4	8	154	300	143	435	168	5	101
	%	0.7	1.3	25.3	49.3	23.5	71.4	27.6	0.8	16.6
1997	#	5	1	35	135	66	166	76	0	47
	%	2.1	-	14.5	55.8	27.3	68.6	31.4	0.0	19.4
1998	#	0	0	47	106	60	159	54	0	58
	%	0.0	0.0	22.1	49.8	28.2	74.6	25.4	0.0	27.2

1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. ICD Codes: AIDS-042, AIDS-like syndrome-043 and Other HIV infection-044. 2. The deaths presented were coded by using the most current ICD-9 classification schedule, which began with 1987 death data. 3. The "Other" category represents Asians and American Indians. 4. Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification.

Table C-12. AIDS and HIV-Related Deaths by Race, Hispanic Ethnicity, and Gender
Persons Ages 25-44, Massachusetts: 1989 – 1998

	White						*Black*						Hispanic[1]					
	Total		Female		Male		Total		Female		Male		Total		Female		Male	
Year	#	Rate[2,3]	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
1989	252	14.0	21	2.3	231	25.9	61	57.2	17	31.1	44	84.8	32	36.0	6	13.3	26	59.4
1990	266	14.4	22	2.4	244	26.8	77	69.2	23	40.4	54	99.4	40	42.4	4	-[3]	36	77.1
1991	409	22.0	51	5.4	358	39.0	102	90.4	28	48.6	74	134.0	55	55.3	16	31.9	39	79.1
1992	435	23.6	49	5.3	386	42.2	111	99.6	26	45.8	85	155.3	79	77.0	15	29.0	64	125.8
1993	463	25.2	58	6.2	405	44.4	126	113.6	33	58.5	93	170.5	76	71.3	19	35.4	57	107.6
1994	573	31.0	96	10.3	477	52.2	156	139.6	40	70.5	116	210.8	127	114.4	34	61.0	93	168.2
1995	545	29.5	94	10.1	451	49.2	166	148.2	48	84.5	118	213.7	124	108.2	34	59.3	90	157.1
1996	331	17.8	52	5.6	279	30.3	118	105.2	42	74.1	76	137.1	85	71.7	24	40.5	61	102.7
1997	121	6.5	23	2.5	98	10.6	49	43.4	18	31.6	31	55.4	36	29.4	8	13.1	28	45.6
1998	113	6.1	24	2.6	89	9.7	40	35.4	11	19.3	29	51.8	47	40.6	13	22.4	34	58.9

1. Persons of Hispanic ethnicity are also included in the race categories, consistent with the US Census population classification. 2. Number of deaths per 100,000 residents in the specified population group. **PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES FOR 1991-1995 (released by MISER in September 1999) AND 1996-1997 (released by MISER In November 1999).** 3. Calculations based on fewer than five events are excluded.

Table C-13A. Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1998

Age	Race/Sex	Total Deaths Certified by Medical Examiner	Motor Vehicle Injuries (E-810-E825)	Suicide (E950-E959)	Homicide (E960-E969)	Legal Intervention/ Undeter. Injury (E970-E999)	All Other Injuries (E800-E809, E826-E949)	Non-violent Causes (000-779)	Ill Defined & Unknown Causes (780-799)
Total	White M	2569	309	372	55	305	266	1202	60
	F	1162	162	108	16	113	127	621	15
	Black M	208	18	11	40	17	19	95	8
	F	88	9	5	4	6	5	51	8
	Other M	149	17	22	18	25	17	47	3
	F	47	4	4	2	8	5	19	5
<1	White M	35	1	0	1	1	2	15	15
	F	19	2	0	1	0	4	8	4
	Black M	7	0	0	0	0	0	3	4
	F	6	0	0	0	0	1	2	3
	Other M	5	0	0	0	2	1	2	0
	F	3	0	0	0	0	0	2	1
1-14	White M	40	7	6	1	0	14	7	5
	F	15	2	2	1	0	6	4	0
	Black M	8	1	0	1	1	3	2	0
	F	7	1	0	0	1	2	3	0
	Other M	6	2	0	1	0	3	0	0
	F	2	0	0	0	0	2	0	0
15-19	White M	112	51	22	8	4	20	5	2
	F	31	23	2	0	1	2	3	0
	Black M	19	2	1	11	0	3	2	0
	F	1	1	0	0	0	0	0	0
	Other M	16	2	3	5	2	2	1	1
	F	0	0	0	0	0	0	0	0
20-29	White M	237	61	63	17	47	18	25	6
	F	68	23	13	3	12	5	10	2
	Black M	43	9	3	15	4	4	8	0
	F	8	3	1	1	0	0	3	0
	Other M	29	6	3	8	9	3	0	0
	F	6	0	1	1	1	1	2	0
30-39	White M	440	55	91	11	122	30	119	12
	F	144	16	21	5	41	7	50	4
	Black M	32	2	4	9	6	2	9	0
	F	18	1	2	3	3	0	7	2
	Other M	29	4	5	3	5	2	9	1
	F	14	1	1	1	5	0	4	2

Table C-13A. Medical Examiner Certified Deaths by Cause, Race, Sex, and Age, Massachusetts Occurrence:1998

Age	Race/Sex	Total Deaths Certified by Medical Examiner	Motor Vehicle Injuries (E-810-E825)	Suicide (E950-E959)	Homicide (E960-E969)	Legal Intervention/ Undeter. Injury (E970-E999)	All Other Injuries (E800-E809, E826-E949)	Non-violent Causes (000-779)	Ill Defined & Unknown Causes (780-799)
40-49	White M	522	40	69	10	108	45	240	10
	F	181	21	31	1	43	5	78	2
	Black M	34	2	0	2	5	2	20	3
	F	20	0	1	0	2	1	13	3
	Other M	29	2	6	0	7	3	11	0
	F	6	0	0	0	2	1	2	1
50-59	White M	385	30	51	3	16	31	251	3
	F	116	9	14	1	10	7	73	2
	Black M	22	0	1	2	1	1	16	1
	F	10	2	1	0	0	0	7	0
	Other M	16	0	3	1	0	1	10	1
	F	5	0	1	0	0	0	4	0
60-69	White M	282	23	22	2	2	23	207	3
	F	147	18	10	1	3	21	94	0
	Black M	22	1	0	0	0	3	18	0
	F	5	0	0	0	0	0	5	0
	Other M	7	1	0	0	0	1	5	0
	F	5	1	0	0	0	1	3	0
70-79	White M	307	19	24	1	2	53	206	2
	F	188	24	6	3	0	19	135	1
	Black M	18	1	1	0	0	1	15	0
	F	7	1	0	0	0	0	6	0
	Other M	8	0	1	0	0	1	6	0
	F	2	1	0	0	0	0	1	0
80+	White M	209	22	24	1	3	30	127	2
	F	253	24	9	0	3	51	166	0
	Black M	3	0	1	0	0	0	2	0
	F	6	0	0	0	0	1	5	0
	Other M	4	0	1	0	0	0	3	0
	F	4	1	1	0	0	0	1	1

Figure C-5. Proportion of Deaths Certified by Medical Examiner for Selected Causes of Death, Massachusettes Occurence Deaths: 1998

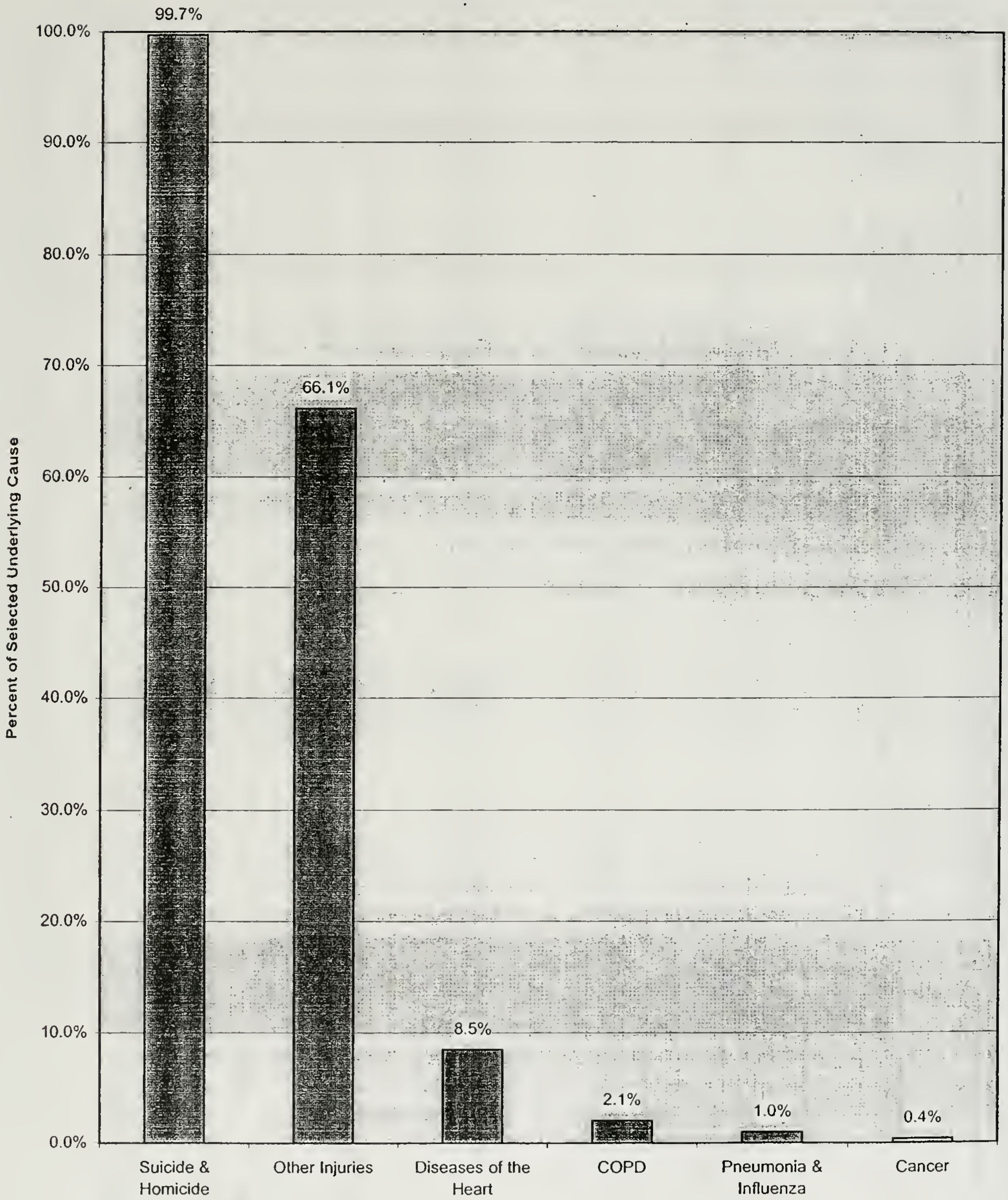

Table C-13B. Medical Examiner Certified Deaths by County, Massachusetts Occurrence: 1998

County		Population	Occurrence Deaths	M.E. Certified	Referred-Not Certified by M.E.	Natural Cause Deaths certified By M.E.
Total	#	6,291,263	55,954	3,931	9,080	1,893
	%	100.00%	100.00%	7.03%	16.23%	48.16%
	Rank	-				
Barnstable	#	205,920	2,529	179	304	90
	%	3.27%	4.52%	7.08%	12.02%	50.28%
	Rank	9				
Berkshire	#	138,938	1,637	90	221	36
	%	2.21%	2.93%	5.50%	13.50%	40.00%
	Rank	11				
Bristol	#	528,904	4,489	317	652	158
	%	8.41%	8.02%	7.06%	14.52%	49.84%
	Rank	6				
Dukes	#	14,272	102	14	5	8
	%	0.23%	0.18%	13.73%	4.90%	57.14%
	Rank	13				
Essex	#	715,669	6,081	422	747	206
	%	11.38%	10.87%	6.94%	12.28%	48.82%
	Rank	3				
Franklin	#	71,615	548	48	67	30
	%	1.14%	0.98%	8.76%	12.23%	62.50%
	Rank	12				
Hampden	#	454,635	4,842	352	859	163
	%	7.23%	8.65%	7.27%	17.74%	46.31%
	Rank	8				
Hampshire	#	158,777	925	71	165	30
	%	2.52%	1.65%	7.68%	17.84%	42.25%
	Rank	10				
Middlesex	#	1,464,685	10,814	661	1,859	370
	%	23.28%	19.33%	6.11%	17.19%	55.98%
	Rank	1				
Nantucket	#	7,705	58	3	2	1
	%	0.12%	0.10%	5.17%	3.45%	33.33%
	Rank	14				
Norfolk	#	657,683	5,115	281	793	147
	%	10.45%	9.14%	5.49%	15.50%	52.31%
	Rank	4				
Plymouth	#	470,158	3,358	272	598	137
	%	7.47%	6.00%	8.10%	17.81%	50.37%
	Rank	7				
Suffolk	#	649,733	8,505	746	1,491	330
	%	10.33%	15.20%	8.77%	17.53%	44.24%
	Rank	5				
Worcester	#	752,569	6,951	475	1,317	187
	%	11.96%	12.42%	6.83%	18.95%	39.37%
	Rank	2				

1,247 Deaths occurred in an unknown county or out of state.

The percentages and ranks in the Medical Examiner Certified Deaths column and the Referred column are based on totals in the Occurrences Deaths column. The percentages and ranks of natural cause of death are based on total number of medical examiner certified deaths for each county.

Table C-14A. Selected Causes of Death by Community, 1998

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Massachusetts	55,204	433.1	15,998	13,796	3,699	1,096	3,321	484	123	2,897	2,542	1,403	503
Abington	120	427.0	33	27	11	0	8	0	1	8	6	1	0
Acton	92	324.6	23	23	4	4	5	2	0	6	6	2	1
Acushnet	73	352.9	17	19	4	0	6	0	0	0	2	5	0
Adams	129	451.8	35	24	3	0	11	1	0	14	6	3	0
Agawam	291	418.7	79	64	21	3	23	2	0	22	13	3	0
Alford	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Amesbury	145	501.2	50	31	10	3	11	4	0	6	6	7	0
Amherst	108	284.4	33	36	9	3	3	2	0	10	2	2	0
Andover	219	341.5	68	52	17	3	17	0	0	8	9	7	1
Arlington	476	394.7	145	116	31	11	34	3	1	24	18	5	2
Ashburnham	26	307.0	7	7	2	1	0	1	0	2	1	2	0
Ashby	21	491.4	4	11	2	0	1	0	0	1	0	1	0
Ashfield	15	362.3	3	5	1	0	3	0	0	2	0	0	0
Ashland	71	322.3	22	19	6	0	6	0	0	3	7	3	1
Athol	125	471.4	36	35	6	2	10	1	0	7	6	2	4
Attleboro	358	519.5	107	86	18	6	28	5	1	18	18	7	2
Auburn	161	417.0	48	53	17	4	9	2	0	6	10	1	2
Avon	43	454.0	11	13	6	1	2	0	0	3	6	1	1
Ayer	69	635.7	18	14	4	1	4	0	0	5	7	4	1
Barnstable	481	366.4	137	118	28	6	24	6	2	19	34	12	4
Barre	33	302.3	11	11	1	5	3	0	0	1	0	0	1
Becket	10	283.1	4	1	0	0	1	0	0	0	1	0	0
Bedford	158	508.6	40	39	11	3	18	2	0	5	2	4	0
Belchertown	79	431.2	25	24	6	4	4	1	0	1	4	2	1
Bellingham	98	482.4	20	27	7	4	4	1	0	7	8	1	1
Belmont	223	250.0	65	55	8	8	9	1	0	18	6	5	0
Berkley	20	383.7	5	5	2	0	2	1	0	1	1	0	0
Berlin	24	545.6	8	4	3	0	0	0	0	2.	2	0	0
Bernardston	26	431.5	6	6	1	1	3	0	0	2	2	2	0
Beverly	437	469.9	139	83	29	5	35	2	0	22	23	0	1
Billerica	240	510.1	55	67	23	2	15	0	0	8	14	11	4
Blackstone	52	419.1	15	19	6	1	7	0	0	2	2	13	2
Blandford	6	291.4	2	2	0	0	0	0	0	0	0	0	0
Bolton	14	236.9	4	5	2	0	3	0	0	0	0	0	0
Boston	4501	533.2	1203	1068	283	78	244	31	35	272	157	116	50

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Bourne	181	432.2	70	33	10	1	4	1	0	11	10	6	3
Boxborough	10	326.0	4	2	1	0	0	2	0	0	0	0	0
Boxford	37	314.0	7	16	1	2	1	0	0	0	2	1	0
Boylston	40	598.1	14	10	3	1	2	1	0	2	3	1	1
Braintree	421	472.1	113	110	30	13	22	0	0	29	12	12	7
Brewster	142	343.0	38	28	5	4	18	3	0	6	8	3	0
Bridgewater	127	406.8	36	36	6	1	8	6	0	5	7	4	3
Brimfield	26	345.0	7	9	1	0	2	0	0	3	1	0	0
Brockton	869	521.4	258	205	67	18	50	13	4	39	41	14	10
Brookfield	32	588.0	9	7	3	0	1	1	0	3	0	0	0
Brookline	436	273.0	126	105	16	11	24	1	2	38	7	2	3
Buckland	15	330.7	9	2	0	0	2	0	0	0	0	0	0
Burlington	140	387.1	22	57	12	6	11	2	0	7	8	3	3
Cambridge	579	376.5	166	149	31	9	31	8	2	20	23	18	8
Canton	206	478.7	60	47	12	2	14	1	0	12	9	4	1
Carlisle	14	213.3	8	2	0	0	0	0	0	0	0	0	0
Carver	97	508.9	31	29	11	1	3	5	0	2	4	2	0
Charlemont	13	543.2	5	7	6	0	0	0	0	0	1	0	0
Charlton	87	572.0	28	24	3	0	4	2	1	0	2	3	0
Chatham	120	370.9	35	32	8	5	9	0	0	5	3	3	0
Chelmsford	264	424.2	90	72	14	4	12	2	0	13	9	4	1
Chelsea	282	530.2	86	54	19	2	13	2	3	17	20	5	1
Cheshire	29	414.6	12	6	3	0	1	0	0	1	2	2	1
Chester	15	832.6	7	5	2	0	0	0	0	0	1	0	0
Chesterfield	5	326.5	1	4	2	0	0	0	0	0	0	0	0
Chicopee	675	516.7	197	175	50	14	36	6	1	36	39	11	5
Chilmark	6	331.7	2	2	0	0	0	0	0	0	0	0	0
Clarksburg	17	361.3	5	8	3	0	1	0	0	1	1	0	0
Clinton	135	549.8	39	38	11	4	8	0	0	6	5	5	1
Cohasset	63	364.0	17	20	5	3	2	1	0	3	4	1	1
Colrain	16	531.1	5	2	0	1	0	0	0	2	1	0	0
Concord	136	303.0	37	29	4	6	9	0	0	6	8	2	2
Conway	8	207.5	2	0	0	0	1	0	0	1	1	0	0
Cummington	5	420.4	0	1	0	0	0	0	0	0	1	1	0
Dalton	72	423.9	19	15	6	1	2	2	0	6	2	2	0
Danvers	269	451.0	101	68	21	3	21	1	0	17	12	1	1
Dartmouth	245	340.8	76	62	12	7	14	8	0	9	9	9	2

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Dedham	231	391.9	67	57	14	1	15	0	0	12	11	1	1
Deerfield	41	386.2	14	16	4	2	3	0	0	1	0	0	0
Dennis	254	435.0	64	65	14	6	27	0	0	7	15	12	2
Dighton	60	553.8	20	16	4	0	2	0	0	2	4	0	1
Douglas	42	448.7	16	8	0	1	4	0	0	3	6	0	0
Dover	31	263.0	8	7	1	1	2	0	0	1	0	1	1
Dracut	185	449.0	48	58	16	4	11	1	0	10	10	4	1
Dudley	88	461.9	36	22	5	2	1	2	0	1	4	3	1
Dunstable	18	766.2	9	5	1	0	1	0	0	0	0	0	0
Duxbury	134	464.0	27	38	8	6	8	2	0	8	5	2	1
East Bridgewater	93	490.0	30	22	5	1	1	0	0	3	8	3	0
East Brookfield	18	329.7	7	5	1	0	1	0	0	0	2	0	0
East Longmeadow	170	404.2	57	31	9	5	9	1	0	7	12	3	1
Eastham	63	356.2	18	21	7	3	2	0	0	4	4	0	1
Easthampton	152	498.5	57	40	10	6	8	2	0	6	5	0	3
Easton	129	400.7	33	42	15	5	5	1	0	10	8	2	3
Edgartown	26	312.2	6	8	1	1	1	0	0	1	1	1	1
Egremont	7	240.6	2	2	1	0	1	0	0	0	2	0	0
Erving	10	336.9	4	3	0	0	0	0	0	0	0	1	0
Essex	26	421.1	5	10	0	1	0	0	0	1	4	1	1
Everett	383	509.1	97	104	30	10	17	2	1	18	16	15	2
Fairhaven	223	498.9	80	48	14	8	15	2	0	6	10	4	2
Fall River	1109	549.4	352	241	64	18	76	10	3	36	55	44	6
Falmouth	381	415.2	106	95	28	7	23	7	0	26	21	9	2
Fitchburg	402	505.4	95	108	35	8	34	2	1	29	26	14	3
Florida	2	188.7	0	0	0	0	1	0	0	0	0	1	0
Foxborough	119	442.0	28	36	8	2	8	0	1	8	7	6	1
Framingham	546	393.6	148	141	41	12	29	1	0	32	28	8	5
Franklin	150	420.1	52	38	9	3	9	1	1	9	3	0	1
Freetown	39	288.0	15	12	5	1	0	1	0	0	1	0	0
Gardner	221	435.1	68	60	9	5	8	2	0	11	10	6	3
Gay Head (Aquinnah)	6	1050.2	3	2	1	0	0	0	0	0	1	0	0
Georgetown	48	393.7	14	10	3	0	4	1	0	3	5	0	2
Gill	17	540.1	5	6	3	1	1	0	0	0	1	0	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Gloucester	322	486.1	86	82	22	7	32	0	1	12	12	11	2
Goshen	2	50.4	1	0	0	0	0	0	0	0	0	0	0
Gosnold	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Grafton	95	391.9	24	21	4	4	8	0	0	6	3	6	1
Granby	33	327.6	13	9	0	2	1	0	0	0	3	0	0
Granville	7	329.0	1	3	2	0	0	0	0	1	0	0	0
Great Barrington	128	565.9	37	22	6	3	10	1	0	7	6	7	0
Greenfield	231	517.7	51	62	17	4	17	4	0	16	14	3	2
Groton	43	377.3	12	11	5	0	2	2	0	0	0	2	0
Groveland	30	347.0	13	3	0	1	4	0	0	0	1	1	2
Hadley	40	297.9	14	6	3	0	4	0	0	1	2	1	0
Halifax	45	271.7	14	16	3	1	2	1	0	2	2	0	1
Hamilton	44	255.1	9	12	4	0	3	0	0	5	3	0	0
Hampden	33	236.6	17	5	0	0	2	0	0	3	0	0	0
Hancock	4	487.5	1	2	0	1	1	0	0	0	0	0	0
Hanover	80	402.3	14	25	5	2	3	1	0	3	4	3	2
Hanson	68	464.4	18	19	4	2	4	1	0	3	2	4	0
Hardwick	23	366.3	5	8	3	3	1	1	0	1	2	0	0
Harvard	22	288.9	7	4	0	1	0	1	0	0	3	0	0
Harwich	194	501.4	51	54	12	3	24	1	1	3	11	6	1
Hatfield	20	319.9	7	5	2	1	1	0	0	0	0	2	1
Haverhill	522	482.8	164	129	30	11	29	5	2	19	26	7	8
Hawley	3	171.9	1	0	0	0	0	0	0	1	0	0	0
Heath	9	1006.3	3	3	0	1	0	1	0	0	0	0	0
Hingham	167	338.3	39	36	6	1	12	2	0	11	10	4	0
Hinsdale	21	369.2	8	5	2	0	0	0	0	1	3	2	0
Holbrook	96	455.2	24	20	7	2	2	1	1	5	6	3	4
Holden	126	337.1	37	27	9	1	4	0	0	12	3	4	0
Holland	15	477.5	2	4	2	0	1	0	0	2	1	1	0
Holliston	73	400.3	15	25	5	2	7	0	0	1	4	2	3
Holyoke	541	671.5	155	107	27	3	49	8	3	37	25	18	5
Hopedale	47	347.5	11	9	3	1	3	1	0	7	4	1	1
Hopkinton	53	374.3	22	13	4	1	2	0	0	3	2	0	1
Hubbardston	11	259.4	6	2	0	0	0	0	0	0	1	0	1
Hudson	100	331.4	32	25	8	0	7	1	0	2	5	2	1
Hull	64	341.0	19	25	5	4	1	1	0	1	1	2	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Huntington	12	277.0	9	2	1	0	0	0	0	0	0	1	0
Ipswich	103	343.0	39	20	3	0	7	2	0	4	5	2	1
Kingston	84	350.4	24	15	2	1	6	1	0	4	3	2	0
Lakeville	77	516.8	24	19	2	0	3	2	0	4	2	7	3
Lancaster	50	412.1	17	8	1	1	3	0	0	5	2	1	2
Lanesborough	33	524.6	12	7	4	0	0	0	0	1	2	2	0
Lawrence	570	490.7	180	120	31	9	30	3	10	20	28	21	9
Lee	68	501.7	15	16	6	1	5	2	0	12	1	4	1
Leicester	97	546.9	28	19	3	1	7	0	0	7	6	4	0
Lenox	79	408.3	22	20	6	0	6	1	0	10	1	1	1
Leominster	373	475.4	111	93	28	8	42	6	1	25	13	5	2
Leverett	3	84.7	0	0	0	0	1	0	0	0	0	1	0
Lexington	243	264.9	66	61	21	4	20	1	0	16	4	1	2
Leyden	3	253.5	2	0	0	0	0	0	0	0	0	0	0
Lincoln	35	240.9	7	10	1	1	2	0	0	3	5	1	0
Littleton	73	477.1	22	18	8	0	4	0	0	4	7	1	1
Longmeadow	176	415.8	42	40	9	5	13	0	0	16	9	4	3
Lowell	938	573.8	250	231	66	11	60	11	3	51	44	37	9
Ludlow	158	412.4	50	46	14	0	7	3	0	1	6	3	1
Lunenburg	77	465.3	18	27	9	4	2	1	0	4	4	1	1
Lynn	797	517.7	229	204	52	14	41	7	1	45	42	16	13
Lynnfield	93	340.8	24	27	7	2	4	1	0	3	3	2	1
Malden	522	479.3	140	133	40	8	25	5	0	18	36	13	1
Manchester	48	380.8	10	16	4	1	6	1	0	1	2	2	0
Mansfield	111	458.6	41	31	7	5	5	1	0	3	4	1	2
Marblehead	177	304.8	49	49	11	7	10	1	0	14	10	2	1
Marion	60	609.7	19	13	5	0	9	0	0	5	4	0	0
Marlborough	296	495.9	80	85	22	8	22	1	0	20	12	3	3
Marshfield	170	539.7	44	49	17	6	13	1	0	5	17	4	2
Mashpee	95	480.5	18	38	10	3	8	0	1	3	6	3	0
Mattapoisett	64	338.9	25	14	5	3	4	0	0	3	3	0	0
Maynard	62	317.5	14	17	10	0	3	0	0	8	1	2	0
Medfield	65	353.2	24	9	0	1	5	0	0	3	5	0	1
Medford	667	480.6	190	170	43	11	37	5	0	38	18	17	4
Medway	77	429.4	20	23	4	2	5	1	0	6	2	3	0
Melrose	277	375.8	89	73	23	4	17	2	0	12	10	3	3
Mendon	31	468.7	6	12	2	1	2	0	0	2	1	1	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Merrimac	32	347.8	7	10	1	0	0	0	0	0	2	1	1
Methuen	391	431.3	141	91	28	6	16	8	1	18	15	17	1
Middleborough	174	596.2	49	43	13	5	10	4	1	12	4	3	1
Middlefield	3	517.9	0	1	0	0	0	0	0	0	0	1	1
Middleton	37	338.7	15	9	4	0	1	0	0	1	2	0	0
Milford	220	456.4	61	54	14	3	6	2	0	13	14	5	4
Millbury	159	529.0	48	33	10	2	16	1	1	6	11	4	0
Millis	63	591.8	18	22	7	0	3	1	0	3	1	1	1
Millville	15	348.4	6	2	1	0	0	0	0	1	2	0	1
Milton	257	355.4	74	61	9	5	32	1	0	14	10	3	1
Monroe	2	266.2	2	0	0	0	0	0	0	0	0	0	0
Monson	59	419.7	16	17	2	2	3	1	0	3	4	1	0
Montague	96	572.4	20	27	8	2	4	1	0	11	4	3	2
Monterey	7	299.7	1	1	0	0	0	1	0	0	2	0	0
Montgomery	4	173.0	1	1	0	0	0	0	0	0	0	0	0
Mount Washington	2	253.9	1	0	0	0	0	0	0	0	1	0	0
Nahant	52	459.4	18	16	4	1	3	1	0	2	0	1	1
Nantucket	66	450.7	29	13	6	3	5	0	1	2	0	0	1
Natick	250	352.5	73	60	20	2	16	2	0	17	10	5	1
Needham	276	265.9	67	63	14	10	24	0	0	19	13	5	1
New Ashford	1	386.8	0	1	0	0	0	0	0	0	0	0	0
New Bedford	1073	495.8	356	231	58	24	72	12	6	51	45	36	2
New Braintree	5	463.1	0	3	0	0	0	0	0	0	1	0	0
New Marlborough	4	66.2	1	0	0	0	0	0	0	0	1	0	0
New Salem	6	297.9	1	2	0	0	0	0	0	1	0	0	0
Newbury	39	342.7	13	14	1	2	3	0	0	2	1	0	0
Newburyport	163	421.8	64	31	7	2	8	0	0	7	7	5	0
Newton	595	271.9	164	174	34	15	33	3	0	36	15	14	7
Norfolk	31	306.9	7	10	2	0	3	0	0	0	2	0	1
North Adams	208	515.4	80	29	9	2	14	1	0	9	17	4	2
North Andover	239	483.5	62	62	12	3	13	3	0	11	14	7	6
North Attleboro	160	379.7	43	48	12	4	7	2	0	5	11	5	1
North Brookfield	31	416.5	6	7	2	2	4	1	0	3	1	1	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
North Reading	82	411.8	15	22	6	1	6	3	0	1	5	3	1
Northampton	269	446.0	82	57	10	5	12	2	1	17	15	6	3
Northborough	85	431.6	28	20	4	1	7	1	0	7	4	3	0
Northbridge	166	510.4	62	34	8	5	10	1	0	13	7	6	2
Northfield	14	296.0	5	3	2	0	1	2	0	0	0	0	0
Norton	97	433.9	39	30	7	3	7	2	0	2	1	0	0
Norwell	94	533.4	20	32	9	2	3	1	0	9	5	2	0
Norwood	282	381.2	91	69	22	8	15	2	0	13	15	3	1
Oak Bluffs	60	722.2	21	13	3	0	6	0	1	1	1	2	0
Oakham	16	774.2	3	6	2	1	0	0	0	0	1	0	1
Orange	58	434.9	17	12	4	1	2	1	0	4	3	0	0
Orleans	107	333.5	24	28	4	1	12	1	0	2	3	1	1
Otis	8	405.5	3	4	0	0	0	0	0	0	0	0	0
Oxford	104	418.9	27	19	3	4	6	1	0	7	8	2	2
Palmer	146	537.2	41	34	13	1	8	3	0	7	9	4	2
Paxton	25	235.6	6	7	1	1	4	1	0	1	1	0	0
Peabody	470	411.7	151	115	37	5	29	2	0	25	23	12	1
Pelham	3	123.5	1	1	0	0	0	0	0	0	0	0	0
Pembroke	108	535.5	32	33	14	5	3	4	0	3	6	3	1
Pepperell	48	319.2	9	15	2	2	0	1	0	4	3	3	1
Peru	3	154.4	1	0	0	0	0	0	0	0	1	0	0
Petersham	10	351.0	4	4	0	1	0	0	0	1	0	0	0
Phillipston	6	303.8	1	1	0	0	1	0	0	0	1	1	0
Pittsfield	554	442.4	178	123	23	11	32	9	0	29	33	12	7
Plainfield	1	92.3	1	0	0	0	0	0	0	0	0	0	0
Plainville	55	419.7	15	18	8	2	0	1	0	3	3	1	0
Plymouth	432	459.8	131	99	35	6	28	3	0	24	17	11	7
Plympton	9	287.6	4	1	0	0	1	1	0	0	0	0	0
Princeton	13	282.7	3	7	1	1	1	0	0	0	0	0	0
Provincetown	58	595.1	9	12	2	1	2	0	0	4	6	0	2
Quincy	925	470.5	243	232	73	9	48	5	2	60	35	18	9
Randolph	295	426.1	97	71	23	8	25	2	0	11	14	10	1
Raynham	88	409.7	33	25	6	2	6	0	0	3	2	1	0
Reading	188	349.7	61	37	10	7	15	1	0	8	8	3	2
Rehoboth	39	216.6	14	11	3	2	0	1	0	2	1	2	1
Revere	467	548.6	139	122	31	9	26	3	2	21	21	17	3
Richmond	18	399.6	4	3	0	0	0	0	0	1	2	1	0
Rochester	29	397.3	14	8	2	1	1	1	0	1	2	0	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Rockland	146	528.8	32	49	16	2	10	0	0	8	3	2	2
Rockport	89	378.1	30	26	5	2	4	1	0	6	4	0	0
Rowe	6	364.7	2	1	1	0	0	0	0	0	0	0	0
Rowley	39	439.6	11	10	4	1	2	0	0	0	1	1	2
Royalston	11	479.0	2	1	0	1	0	0	0	2	1	1	0
Russell	8	282.7	3	1	0	0	0	0	0	1	1	1	0
Rutland	24	271.8	9	9	1	0	3	0	0	0	1	0	0
Salem	376	457.9	114	97	27	11	23	2	0	23	13	9	2
Salisbury	78	619.2	26	20	5	3	3	1	2	2	2	1	0
Sandisfield	7	433.2	3	1	0	0	0	0	0	1	1	0	0
Sandwich	147	307.7	43	41	12	4	8	0	0	11	11	7	1
Saugus	253	451.1	69	72	15	2	15	3	0	12	17	3	3
Savoy	5	413.8	3	0	0	0	0	0	0	0	0	0	1
Scituate	146	353.5	41	31	12	2	4	1	0	13	9	2	0
Seekonk	90	355.8	23	25	5	0	4	1	0	1	6	0	2
Sharon	105	309.1	24	40	6	5	11	1	0	2	4	2	2
Sheffield	27	406.6	4	11	3	1	4	0	0	0	0	0	0
Shelburne	30	483.7	12	5	1	0	1	0	0	5	2	0	0
Sherborn	22	305.0	3	8	0	3	3	0	0	1	0	0	3
Shirley	41	451.2	16	8	0	2	1	1	0	2	2	2	1
Shrewsbury	245	425.8	63	49	13	2	22	3	0	19	11	9	2
Shutesbury	7	270.4	2	2	0	0	0	0	0	0	1	0	0
Somerset	182	357.6	49	58	16	5	9	1	0	6	5	3	1
Somerville	570	452.1	188	160	57	10	13	6	0	21	26	15	8
South Hadley	181	466.1	59	46	11	6	13	0	0	6	13	4	1
Southampton	30	321.5	6	13	5	2	1	0	0	3	0	0	0
Southborough	32	290.7	6	10	2	2	2	0	0	2	2	2	0
Southbridge	203	560.4	72	48	14	5	6	3	1	8	2	3	3
Southwick	69	507.3	20	22	5	1	3	0	0	2	7	0	1
Spencer	113	520.4	43	27	7	1	5	1	1	2	6	2	1
Springfield	1438	580.8	384	341	94	29	81	11	9	67	68	52	13
Sterling	43	440.6	13	12	5	1	3	0	0	1	1	3	1
Stockbridge	12	215.5	3	5	2	0	0	0	0	0	1	0	0
Stoneham	217	410.7	61	62	16	5	20	0	0	10	13	4	0
Stoughton	230	397.3	83	54	12	7	12	1	0	14	8	5	2
Stow	22	292.6	7	5	2	0	0	0	0	0	4	0	1
Sturbridge	68	449.8	13	22	3	1	3	2	0	1	6	3	0
Sudbury	84	348.8	24	21	5	2	7	0	0	5	3	5	0

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
Sunderland	19	500.6	4	7	3	0	2	0	0	0	1	0	1
Sutton	42	382.1	10	13	4	0	4	1	0	0	4	3	0
Swampscott	165	359.7	57	40	10	4	7	0	0	6	9	5	0
Swansea	156	429.3	52	34	13	1	12	3	0	8	7	9	2
Taunton	457	447.7	136	114	27	10	22	3	0	28	21	18	2
Templeton	82	565.7	27	24	5	2	6	0	0	4	3	2	0
Tewksbury	203	449.1	56	60	22	5	8	2	0	11	8	5	5
Tisbury	28	379.9	7	9	1	3	0	0	0	0	2	1	1
Tolland	4	931.6	1	1	1	0	0	0	0	0	0	1	0
Topsfield	50	366.2	14	16	7	0	3	0	0	3	2	2	0
Townsend	43	415.7	15	12	4	0	1	1	0	1	4	1	0
Truro	26	350.8	5	12	2	2	0	0	0	2	2	0	0
Tyngsborough	57	520.8	14	16	6	1	1	1	1	5	4	1	1
Tyringham	2	110.1	0	1	0	0	0	0	0	0	0	0	0
Upton	41	376.4	8	7	1	1	2	1	0	5	2	1	0
Uxbridge	62	311.5	15	22	7	2	3	1	0	2	3	2	1
Wakefield	212	350.6	61	58	10	5	17	1	0	10	7	3	2
Wales	15	786.4	6	3	1	0	0	1	0	0	0	0	0
Walpole	200	458.5	53	50	11	0	10	0	1	6	15	5	0
Waltham	496	450.5	127	142	49	8	30	1	0	27	25	19	3
Ware	98	457.6	32	21	6	2	5	0	0	8	5	4	1
Wareham	242	583.1	82	53	15	3	16	4	0	16	11	10	3
Warren	44	560.6	15	13	4	1	2	1	0	3	0	1	2
Warwick	7	471.9	3	1	0	0	0	0	0	0	0	0	0
Washington	3	27.7	1	0	0	0	0	0	0	1	0	0	0
Watertown	338	428.7	95	96	24	8	29	1	0	28	10	2	3
Wayland	80	294.9	27	16	4	0	11	1	0	4	4	0	0
Webster	212	539.3	61	48	11	5	9	4	0	17	12	12	2
Wellesley	182	231.6	49	36	5	5	10	0	0	14	4	2	1
Wellfleet	35	442.7	9	14	3	2	2	0	0	1	1	0	2
Wendell	6	382.9	2	0	0	0	1	0	0	0	0	0	1
Wenham	37	413.9	6	12	6	2	1	0	0	3	4	0	1
West Boylston	70	400.2	18	24	5	1	3	0	0	4	6	1	0
West Bridgewater	70	451.3	22	19	5	3	4	1	0	3	2	0	0
West Brookfield	42	372.9	11	9	0	0	3	0	1	4	3	2	0
West Newbury	18	325.5	4	5	1	0	0	0	0	0	2	0	1

Table C-14A. Selected Causes of Death by Community, 1998 (continued)

COMMUNITY	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homicide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
West Springfield	285	440.8	73	65	10	5	18	3	0	17	20	7	6
West Stockbridge	11	365.9	3	3	1	0	1	1	0	1	0	0	0
West Tisbury	14	371.4	2	4	1	1	2	2	0	1	1	0	0
Westborough	139	397.3	32	28	9	1	9	2	0	12	7	5	1
Westfield	346	395.8	109	89	28	7	15	4	0	22	11	6	5
Westford	75	314.5	22	27	8	1	6	0	0	3	5	0	2
Westhampton	5	291.1	1	2	0	0	0	1	0	0	0	0	0
Westminster	41	364.6	9	9	2	0	5	0	1	2	0	2	1
Weston	118	362.6	32	21	6	2	12	1	0	9	3	5	1
Westport	118	375.1	37	38	12	1	6	1	1	5	2	6	1
Westwood	139	393.2	39	34	7	4	12	2	0	5	8	0	1
Weymouth	523	509.1	142	154	48	14	32	3	0	16	24	13	6
Whately	7	128.1	4	0	0	0	0	0	0	1	0	0	0
Whitman	87	426.5	26	24	9	2	2	0	0	5	7	1	2
Wilbraham	115	374.9	35	27	5	5	6	1	0	6	2	4	3
Williamsburg	22	454.0	4	8	3	0	0	1	0	0	2	1	1
Williamstown	89	365.0	29	13	5	1	10	1	0	7	6	1	1
Wilmington	156	630.0	41	46	17	3	6	1	0	4	6	2	1
Winchendon	71	492.4	26	17	2	3	6	4	0	1	5	1	0
Winchester	181	307.6	43	64	12	6	12	1	1	12	9	4	1
Windsor	6	353.6	2	2	0	0	0	1	0	1	0	0	0
Winthrop	203	464.9	62	40	11	5	10	0	0	9	12	5	1
Woburn	319	446.8	100	96	37	8	19	1	0	8	17	8	2
Worcester	1885	554.1	554	408	121	40	97	14	4	116	74	72	12
Worthington	2	54.9	0	0	0	0	0	0	0	0	0	0	0
Wrentham	91	551.5	23	27	8	2	4	2	0	6	3	0	0
Yarmouth	386	402.9	100	114	33	8	22	4	0	15	17	13	2

[1] All rates are age adjusted using the 1940 US Census standard population. [2] Includes only female breast cancer. [3] Chronic Obstructive Pulmonary Disease

Table C-14B. Selected Causes of Death by Community Health Network Area (CHNA), 1998

CHNA (Name and number)	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homi- cide	Pneumonia & Influenza	COPD[3]	Diabetes	Suicide
MASSACHUSETTS	55,204	433.1	15,998	13,796	3,699	1,096	3,321	484	123	2,897	2,542	1,403	503
Alliance for Community Health (Boston, Chelsea, Revere, Winthrop) (19)	5,889	505.6	1616	1389	360	105	317	37	42	357	217	145	58
Beverly/Gloucester Area (13)	1,156	421.6	338	277	80	18	91	6	1	57	59	29	9
Blue Hills Community Health Alliance (Quincy) (20)	3,548	423.6	980	928	260	76	221	21	2	194	152	76	29
Cambridge/Somerville Area (17)	2,186	392.2	659	576	151	46	116	19	3	111	83	45	21
Cape Cod & Islands Community Health Network (27)	2,876	395.3	797	756	191	64	199	25	6	124	158	79	24
Community Health Network of Berkshire (1)	1,566	423.2	489	325	83	21	101	21	0	103	92	42	14
Community Partners for Health (Milford Area) (6)	1,043	420.7	302	268	66	24	59	10	1	70	58	23	11
Community Wellness Coalition (Worcester Area) (8)	2,903	489.6	840	651	186	57	172	22	5	179	128	102	18
Fitchburg/Gardner Community Health Network (9)	1,971	436.0	560	533	139	53	137	23	3	107	97	57	20
Greater Attleboro/Taunton Area (24)	1,731	444.0	534	453	106	37	96	22	2	81	75	44	15
Greater Brockton Community Health Network (22)	1,864	455.1	556	462	143	40	94	23	6	95	99	34	25
Greater Framingham Area (7)	2,539	384.9	701	665	186	41	164	13	2	146	129	53	24
Greater Haverhill Area (12)	1,151	442.3	373	279	63	25	65	11	4	39	55	24	16
Greater Holyoke Area (3)	1,058	394.7	337	274	67	31	52	9	1	52	52	24	12
Greater Lawrence Area (11)	1,456	422.8	466	334	92	21	77	14	11	58	68	52	17
Greater Lowell Community Health Network (10)	1,980	478.7	544	536	156	28	114	17	4	101	94	64	21
Greater New Bedford Area (26)	2,048	445.7	684	460	120	47	137	28	6	91	87	64	9
Greater Southbridge Area (5)	1,098	484.9	343	267	60	21	48	19	4	54	48	33	11
Greater Springfield Community Health Network (4)	2,811	489.4	772	654	171	56	166	22	9	152	145	80	29
Greater Woburn/Concord/Littleton Area (15)	1,557	362.4	413	447	128	41	106	12	1	71	72	28	13
Hampshire County Partnership for Health (21)	1,747	507.1	527	424	122	24	107	21	4	96	82	39	16
Medford/Malden/Melrose Area (16)	2,548	433.5	714	659	178	51	154	19	1	115	113	61	15
North Shore Community Health Network (14)	2,652	435.0	812	688	184	49	153	18	1	147	129	51	23
Partners for a Healthier Community (Fall River) (25)	1,565	478.9	490	371	105	25	103	15	4	55	69	62	10
South Shore Partners in Prevention (Plymouth) (23)	1,373	458.8	371	373	115	32	81	20	0	62	63	33	16
Upper Valley Health Web (Franklin County) (2)	820	439.9	227	213	57	17	53	10	0	57	39	12	11
West Suburban Health Network (Newton/Waltham) (18)	2,068	319.1	553	534	130	46	138	7	0	123	79	47	16

1. All rates are age-adjusted using the 1940 US Census standard population. 2. Includes only female breast cancer. 3. Chronic Obstructive Pulmonary Disease.

Table C-14C . Selected Causes of Death by County, 1998

County Name	Total Deaths	Age-adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	Motor Vehicle	Homi-cide	Pneumonia &Influenza	COPD[3]	Diabetes	Suicide
Massachusetts	**55,204**	**433.1**	**15,998**	**13,796**	**3,699**	**1,096**	**3,321**	**484**	**123**	**2,897**	**2,542**	**1,403**	**503**
Barnstable	2,670	391.4	727	705	178	56	185	23	4	119	152	75	21
Berkshire	1,566	423.2	489	325	83	21	101	21	0	103	92	42	14
Bristol	4,827	440.8	1528	1176	304	102	298	55	11	196	213	152	30
Dukes	140	441.4	41	38	7	5	9	2	1	3	6	4	2
Essex	6,415	429.8	1989	1578	419	113	386	49	17	301	311	156	65
Franklin	668	441.6	184	172	51	13	42	9	0	47	31	8	7
Hampden	4,602	495.5	1305	1092	296	80	276	44	13	253	229	119	45
Hampshire	1,070	393.2	346	276	68	31	52	9	1	52	52	25	12
Middlesex	11,404	395.6	3194	3061	846	226	687	83	9	579	501	279	103
Nantucket	66	450.7	29	13	6	3	5	0	1	2	0	0	1
Norfolk	5,690	393.1	1595	1453	374	125	355	28	8	322	239	103	50
Plymouth	3,856	457.7	1108	980	292	78	217	56	6	200	185	86	38
Suffolk	5,453	531.3	1490	1284	344	94	293	36	40	319	210	143	55
Worcester	6,777	459.2	1973	1643	431	149	415	69	12	401	321	211	60

1. All rates are age-adjusted using the 1940 US Census standard population. 2. Includes only female breast cancer. 3. Chronic Obstructive Pulmonary Disease

TABLE C-15
RESIDENT DEATHS BY CAUSE, SEX, AND RACE
1998

ICO. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*001 139	I. INFECTIVE AND PARASITIC DISEASES	1258	664	594	1146	605	541	102	55	47	10	4	6
001-009	INTESTINAL INFECTIOUS DISEASES	39	19	20	39	19	20	0	0	0	0	0	0
004	OTHER SALMONELLA INFECTIONS	2	2	0	2	2	0	0	0	0	0	0	0
008	INTESTINAL INFECTIONS DUE TO OTHER ORGANISMS	32	14	18	32	14	18	0	0	0	0	0	0
009	ILL-DEFINED INTESTINAL INFECTIONS	5	3	2	5	3	2	0	0	0	0	0	0
010-018	TUBERCULOSIS	13	7	6	10	6	4	1	0	1	2	1	1
011	PULMONARY TUBERCULOSIS	9	6	3	7	6	1	1	0	1	1	0	1
016	TUBERCULOSIS OF GENITOURINARY SYSTEM	1	0	1	1	0	1	0	0	0	0	0	0
017	TUBERCULOSIS OF OTHER ORGANS	3	1	2	2	0	2	0	0	0	1	1	0
030-041	OTHER BACTERIAL DISEASES	799	355	444	757	338	419	37	14	23	5	3	2
031	DISEASES DUE TO OTHER MYCOBACTERIA	7	4	3	7	4	3	0	0	0	0	0	0
036	MENINGOCOCCAL INFECTION	1	0	1	1	0	1	0	0	0	0	0	0
038	SEPTICEMIA	780	347	433	739	331	408	36	13	23	5	3	2
040	OTHER BACTERIAL DISEASES	4	1	3	4	1	3	0	0	0	0	0	0
041	BACTERIAL INF IN COND CE & OF UNSPECF SITE	7	3	4	6	2	4	1	1	0	0	0	0
042-044	AIDS, ARC AND ARV	213	169	44	162	132	30	51	37	14	0	0	0
042	AIDS	199	159	40	152	125	27	47	34	13	0	0	0
043	ARC, AIDS-LIKE SYNDROME	1	1	0	1	1	0	0	0	0	0	0	0
044	OTHER HIV INFECTION	13	9	4	9	6	3	4	3	1	0	0	0
045-049	POLIOMYELITIS AND OTHER ENTEROVIRUS DIS. OF CENTRAL NERVOUS SYSTEM	11	3	8	11	3	8	0	0	0	0	0	0
046	SLOW VIRUS INFECTION OF CNS	9	2	7	9	2	7	0	0	0	0	0	0
047	MENINGITIS DUE TO ENTEROVIRUS	1	0	1	1	0	1	0	0	0	0	0	0
049	OTHER NON-ARTHROPOD-BORNE VIRAL DIS OF CNS	1	1	0	1	1	0	0	0	0	0	0	0
050-057	VIRAL DISEASES ACCOMPANIED BY EXANTHEM	8	1	7	8	1	7	0	0	0	0	0	0
052	CHICKENPOX	2	0	2	2	0	2	0	0	0	0	0	0
053	HERPES ZOSTER	3	1	2	3	1	2	0	0	0	0	0	0
054	HERPES SIMPLEX	3	0	3	3	0	3	0	0	0	0	0	0
070-079	OTHER VIRAL DISEASES	87	61	26	82	60	22	3	1	2	2	0	2
070	VIRAL HEPATITIS	75	57	18	70	56	14	3	1	2	2	0	2
078	OTHER DIS DUE TO VIRUSES & CHLAMYDIAE	2	0	2	2	0	2	0	0	0	0	0	0
079	VIRAL INF IN COND CE & OF UNSPECIFIED SITE	10	4	6	10	4	6	0	0	0	0	0	0
090-099	SYPHILIS AND OTHER VENEREAL DISEASES	1	1	0	1	1	0	0	0	0	0	0	0
090	CONGENITAL SYPHILIS	1	1	0	1	1	0	0	0	0	0	0	0
110-118	MYCOSES	42	26	16	39	24	15	3	2	1	0	0	0
112	CANDIDIASIS	11	4	7	10	4	6	1	0	1	0	0	0
117	OTHER MYCOSES	31	22	9	29	20	9	2	2	0	0	0	0
130-136	OTHER INFECTIVE AND PARASITIC DISEASES	37	18	19	29	17	12	7	1	6	1	0	1
135	SARCOIDOSIS	16	7	9	11	6	5	5	1	4	0	0	0
136	OTHER & UNSPECIFIED INFECTIOUS & PARASITIC DISEASES	21	11	10	18	11	7	2	0	2	1	0	1
137-139	LATE EFFECTS OF INFECTIOUS AND PARASITIC DISEASES	8	4	4	8	4	4	0	0	0	0	0	0
137	LATE EFFECTS OF TUBERCULOSIS	1	0	1	1	0	1	0	0	0	0	0	0
138	LATE EFFECTS OF ACUTE POLIOMYELITIS	5	3	2	5	3	2	0	0	0	0	0	0
139	LATE EFFECTS OF OTH INFECT & PARASITIC DISEASES	2	1	1	2	1	1	0	0	0	0	0	0

TABLE C-15

1998

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*140 239	II. NEOPLASMS	14007	6990	7017	13369	6654	6715	508	271	237	130	65	65
140-149	MALIGNANT NEOPLASM OF LIP, ORAL CAVITY AND PHARYNX	190	120	70	178	112	66	7	5	2	5	3	2
140	MALIG NEOPLASM LIP	3	3	0	3	3	0	0	0	0	0	0	0
141	MALIG NEOPLASM TONGUE	45	28	17	41	24	17	2	2	0	2	2	0
142	MALIG NEOP MAJOR SALIVARY GLANDS	13	6	7	12	6	6	1	0	1	0	0	0
143	MALIG NEOPLASM GUM	1	1	0	1	1	0	0	0	0	0	0	0
144	MALIG NEOPLASM FLOOR OF MOUTH	8	3	5	8	3	5	0	0	0	0	0	0
145	MALIG NEOPLASM OTHER & UNSPECF PARTS OF MOUTH	28	18	10	28	18	10	0	0	0	0	0	0
146	MALIG NEOPPLASM OROPHARYNX	25	20	5	24	19	5	1	1	0	0	0	0
147	MALIG NEOPLASM NASOPHARYNX	22	12	10	18	10	8	1	1	0	3	1	2
148	MALIG NEOPLASM HYPOPHARYNX	11	5	6	11	5	6	0	0	0	0	0	0
149	MALIG NEOP OTH SITES W/IN LIP, ORAL CAVITY, PHARYNX	34	24	10	32	23	9	2	1	1	0	0	0
150-159	MALIGNANT NEOPLASM OF DIGESTIVE ORGANS AND PERITONEUM	3501	1815	1686	3307	1698	1609	148	88	60	46	29	17
150	MALIG NEOPLASM ESOPHAGUS	356	256	100	332	239	93	21	15	6	3	2	1
151	MALIG NEOPLASM STOMACH	369	208	161	339	191	148	23	12	11	7	5	2
152	MALIG NEOPLASM SMALL INTESTINE INCLUDING DUODENUM	26	9	17	26	9	17	0	0	0	0	0	0
153	MALIG NEOPLASM COLON	1321	617	704	1251	583	668	55	29	26	15	5	10
154	MALIG NEOPLASM RECTUM, RECTOSIGMOID JUNCT, ANUS	263	152	111	254	145	109	7	6	1	2	1	1
155	MALIG NEOPLASM LIVER & INTRAHEPATIC BILE DUCTS	283	185	98	257	162	95	13	12	1	13	11	2
156	MALIG NEOPLASM OF GALLBLADDER & EXTRAHEPATIC BILE DUCTS	77	27	50	75	26	49	2	1	1	0	0	0
157	MALIG NEOPLASM PANCREAS	749	335	414	717	318	399	26	12	14	6	5	1
158	MALIG NEOPLASM RETROPERITONEUM & PERITONEUM	15	5	10	14	4	10	1	1	0	0	0	0
159	MALIG NEOP OTH SITES W/IN DIGESTIVE ORGS/PERITONEUM	42	21	21	42	21	21	0	0	0	0	0	0
160-165	MALIGNANT NEOPLASM OF RESPIRATORY AND INTRATHORACIC ORGANS	3813	2123	1690	3662	2030	1632	123	78	45	28	15	13
160	MALIG NEOPLASM NASAL CAVITIES, MIDDLE EAR, SINUSES	6	2	4	6	2	4	0	0	0	0	0	0
161	MALIG NEOPLASM LARYNX	100	81	19	93	74	19	7	7	0	0	0	0
162	MALIG NEOPLASM TRACHEA, BRONCHUS, LUNG	3699	2035	1664	3555	1949	1606	116	71	45	28	15	13
163	MALIG NEOPLASM PLEURA	2	1	1	2	1	1	0	0	0	0	0	0
164	MALIG NEOPLASM THYMUS, HEART, MEDIASTINUM	6	4	2	6	4	2	0	0	0	0	0	0
170-175	MALIGNANT NEOPLASM OF BONE, CONNECTIVE TISSUE, SKIN, AND BREAST	1514	250	1264	1438	241	1197	58	7	51	18	2	16
170	MALIG NEOPLASM BONE & ARTICULAR CARTILAGE	22	15	7	21	15	6	1	0	1	0	0	0
171	MALIG NEOPLASM CONNECTIVE & OTH SOFT TISSUE	125	54	71	110	47	63	13	6	7	2	1	1
172	MALIG MELANOMA OF SKIN	204	128	76	204	128	76	0	0	0	0	0	0
173	OTHER MALIG NEOPLASM SKIN	61	47	14	59	45	14	1	1	0	1	1	0
174	MALIG NEOPLASM FEMALE BREAST	1096	0	1096	1038	0	1038	43	0	43	15	0	15
175	MALIG NEOPLASM MALE BREAST	6	6	0	6	6	0	0	0	0	0	0	0
179-189	MALIGNANT NEOPLASM OF GENITOURINARY ORGANS	1970	1157	813	1891	1109	782	70	44	26	9	4	5
179	MALIG NEOPLASM UTERUS, PART UNSPECIFIED	68	0	68	67	0	67	1	0	1	0	0	0
180	MALIG NEOPLASM CERVIX UTERI	91	0	91	82	0	82	8	0	8	1	0	1
181	MALIG NEOPLASM PLACENTA	1	0	1	1	0	1	0	0	0	0	0	0
182	MALIG NEOPLASM BODY OF UTERUS	87	0	87	80	0	80	6	0	6	1	0	1
183	MALIG NEOPLASM OVARY & OTHER UTERINE ADNEXA	308	0	308	301	0	301	5	0	5	2	0	2
184	MALIG NEOPLASM OTH & UNSPECF FEMALE GENITAL ORGANS	44	0	44	43	0	43	0	0	0	1	0	1
185	MALIG NEOPLASM PROSTATE	763	763	0	719	719	0	40	40	0	4	4	0
186	MALIG NEOPLASM TESTIS	6	6	0	6	6	0	0	0	0	0	0	0

TABLE C-15 (CONTINUED)

1998

ICD. LIST NUMBER	CAUSE OF DEATH II. NEOPLASMS (CONTINUED)	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
187	MALIG NEOPLASM PENIS & OTHER MALE GENITAL ORGANS	4	4	0	4	4	0	0	0	0	0	0	0
188	MALIG NEOPLASM BLADDER	320	213	107	315	212	103	5	1	4	0	0	0
189	MALIG NEOPLASM KIDNEY & OTH & UNSPECF URINARY ORGANS	278	171	107	273	168	105	5	3	2	0	0	0
190-199	MALIGNANT NEOPLASM OF OTHER AND UNSPECIFIED SITES	1493	757	736	1431	725	706	50	26	24	12	6	6
190	MALIG NEOPLASM EYE	3	1	2	3	1	2	0	0	0	0	0	0
191	MALIG NEOPLASM BRAIN	305	166	139	296	159	137	7	5	2	2	2	0
192	MALIG NEOP OTHER & UNSPECF PARTS NERVOUS SYSTEM	5	4	1	5	4	1	0	0	0	0	0	0
193	MALIG NEOPLASM THYROID GLAND	28	9	19	24	7	17	2	1	1	2	1	1
194	MALIG NEOPLASM OTH ENDOCRINE GLANDS & PELATED	13	7	6	13	7	6	0	0	0	0	0	0
195	MALIG NEOPLASM OTHER & ILL-DEFINED SITES	93	50	43	88	47	41	5	3	2	0	0	0
199	MALIG NEOPLASM W/O SPECIFICATION OF SITE	1046	520	526	1002	500	502	36	17	19	8	3	5
200-208	NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUE	1315	680	635	1263	655	608	41	19	22	11	6	5
200	LYMPHOSARCOMA & RETICULOSARCOMA	12	8	4	10	8	2	0	0	0	2	0	2
201	HODGKIN'S DISEASE	36	20	16	36	20	16	0	0	0	0	0	0
202	OTHER MALIG NEOP LYMPHOID & HISTIOCYTIC TISSUE	587	303	284	570	294	276	11	6	5	6	3	3
203	MULTIPLE MYELOMA & IMMUNOPROLIFERATIVE NEOPS	227	103	124	208	95	113	19	8	11	0	0	0
204	LYMPHOID LEUKEMIA	117	62	55	115	60	55	1	1	0	1	1	0
205	MYELOID LEUKEMIA	203	116	87	193	111	82	8	3	5	2	2	0
206	MONOCYTIC LEUKEMIA	2	1	1	2	1	1	0	0	0	0	0	0
207	OTHER SPECIFIED LEUKEMIA	1	0	1	1	0	1	0	0	0	0	0	0
208	LEUKEMIA OF UNSPECIFIED CELL TYPE	130	67	63	128	66	62	2	1	1	0	0	0
210-229	BENIGN NEOPLASMS	39	15	24	33	13	20	5	2	3	1	0	1
211	BENIGN NEOPLASM OTH PARTS DIGESTIVE SYSTEM	3	2	1	3	2	1	0	0	0	0	0	0
212	BENIGN NEOP RESPIRATORY & INTRATHORACIC ORGANS	2	2	0	1	1	0	1	1	0	0	0	0
215	OTH BENIGN NEOP CONNECTIVE & OTHER SOFT TISSUE	1	0	1	1	0	1	0	0	0	0	0	0
216	BENIGN NEOPLASM SKIN	1	0	1	1	0	1	0	0	0	0	0	0
225	BENIGN NEOPLASM BRAIN & OTH PARTS NERVOUS SYSTEM	29	9	20	25	8	17	3	1	2	1	0	1
227	BENIGN NEOPLASM OTH ENDOCRINE GLANDS & RELATED	1	1	0	1	1	0	0	0	0	0	0	0
228	HEMANGIOMA & LYMPHANGIOMA, ANY SITE	2	1	1	1	1	0	1	0	1	0	0	0
235-238	NEOPLASMS OF UNCERTAIN BEHAVIOUR	39	17	22	38	17	21	1	0	1	0	0	0
235	NEOPLASM OF UNCERT BEHAV DIGESTIVE & RESPIRATORY SYS	2	1	1	2	1	1	0	0	0	0	0	0
236	NEOPLASM OF UNCERT BEHAV GENITOURINARY ORGANS	1	0	1	1	0	1	0	0	0	0	0	0
237	NEOPLASM OF UNCERT BEHAV ENDOCRINE GLANDS & NERVOUS SYS	3	1	2	3	1	2	0	0	0	0	0	0
238	NEOPLASM UNCERT BEHAV OTHER & UNSPECF SITES & TISSUES	33	15	18	32	15	17	1	0	1	0	0	0
239-239	NEOPLASM OF UNSPECIFIED NATURE	133	56	77	128	54	74	5	2	3	0	0	0
239	NEOPLASMS OF UNSPECIFIED NATURE	133	56	77	128	54	74	5	2	3	0	0	0

TABLE C-15

1998

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*240 279	III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES	2000	899	1101	1872	833	1039	112	57	55	16	9	7
240-246	DISORDERS OF THYROID GLAND	38	10	28	37	10	27	1	0	1	0	0	0
240	SIMPLE AND UNSPECIFIED GOITER	2	0	2	2	0	2	0	0	0	0	0	0
242	THYROTOXICOSIS WITH OR W/O GOITER	7	4	3	7	4	3	0	0	0	0	0	0
244	ACQUIRED HYPOTHYROIDISM	28	5	23	27	5	22	1	0	1	0	0	0
246	OTHER DISORDERS OF THRYOID	1	1	0	1	1	0	0	0	0	0	0	0
250-259	DISEASES OF OTHER ENDOCRINE GLANDS	1426	691	735	1328	639	689	83	44	39	15	8	7
250	DIABETES MELLITUS	1403	683	720	1307	633	674	81	42	39	15	8	7
251	OTH DISORDERS OF PANCREATIC INTERNAL SECRETION	6	4	2	5	3	2	1	1	0	0	0	0
253	DISORDERS PITUITARY GLAND & HYPOTHALMIC CONTROL	12	3	9	12	3	9	0	0	0	0	0	0
255	DISORDERS OF ADRENAL GLANDS	5	1	4	4	0	4	1	1	0	0	0	0
260-269	NUTRITIONAL DEFICIENCIES	63	16	47	63	16	47	0	0	0	0	0	0
260	KWASHIORKOR	2	0	2	2	0	2	0	0	0	0	0	0
261	NUTRITIONAL MARASMUS	2	2	0	2	2	0	0	0	0	0	0	0
263	OTH & UNSPECF PROTEIN-CALORIE MALNUTRITION	56	14	42	56	14	42	0	0	0	0	0	0
269	OTHER NUTRITIONAL DEFICIENCIES	3	0	3	3	0	3	0	0	0	0	0	0
270-279	OTHER METABOLIC AND IMMUNITY DISORDERS	473	182	291	444	168	276	28	13	15	1	1	0
270	DISORDERS OF AMINO-ACID TRANSPORT & METABOLISM	1	1	0	1	1	0	0	0	0	0	0	0
271	DISORDERS OF CARBOHYDRATE TRANSPORT & METABOLISM	1	1	0	0	0	0	1	1	0	0	0	0
272	DISORDERS OF LIPOID METABOLISM	59	33	26	58	32	26	1	1	0	0	0	0
273	DISORDERS OF PLASMA PROTEIN METABOLISM	16	10	6	15	10	5	1	0	1	0	0	0
274	GOUT	1	0	1	1	0	1	0	0	0	0	0	0
275	DISORDERS OF MINERAL METABOLISM	11	6	5	11	6	5	0	0	0	0	0	0
276	DISORDERS FLUID, ELECTROLYTE, ACID-BASE BALANCE	267	65	202	254	63	191	13	2	11	0	0	0
277	OTHER & UNSPECIFIED DISORDERS OF METABOLISM	53	27	26	46	23	23	6	3	3	1	1	0
278	OBESITY & HYPERALIMENTATION	51	30	21	48	27	21	3	3	0	0	0	0
279	DISORDERS INVOLVING THE IMMUNE MECHANISM	13	9	4	10	6	4	3	3	0	0	0	0
*280 289	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	251	94	157	234	87	147	15	7	8	2	0	2
280	IRON DEFICIENCY ANEMIAS	1	0	1	1	0	1	0	0	0	0	0	0
281	OTHER DEFICIENCY ANEMIAS	7	0	7	7	0	7	0	0	0	0	0	0
282	HEREDITARY HEMOLYTIC ANEMIAS	12	5	7	5	2	3	7	3	4	0	0	0
283	ACQUIRED HEMOLYTIC ANEMIAS	1	0	1	1	0	1	0	0	0	0	0	0
284	APLASTIC ANEMIA	32	10	22	32	10	22	0	0	0	0	0	0
285	OTHER AND UNSPECIFIED ANEMIAS	71	17	54	69	17	52	1	0	1	1	0	1
286	COAGULATION DEFECTS	32	15	17	29	12	17	3	3	0	0	0	0
287	PURPURA & OTHER HEMORRHAGIC CONDITIONS	16	7	9	16	7	9	0	0	0	0	0	0
288	DISEASES OF WHITE BLOOD CELLS	7	3	4	7	3	4	0	0	0	0	0	0
289	OTHER DISEASES OF BLOOD & BLOOD-FORMING ORGANS	72	37	35	67	36	31	4	1	3	1	0	1

TABLE C-15 (CONTINUED)

1998

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*290 319	V. MENTAL DISORDERS	1596	528	1068	1539	504	1035	49	22	27	7	1	6
290-294	ORGANIC PSYCHOTIC CONDITIONS	561	163	398	545	158	387	13	5	8	3	0	3
290	SENILE & PRESENILE ORGANIC PSYCHOTIC CONDITIONS	545	152	393	529	147	382	13	5	8	3	0	3
291	ALCOHOLIC PSYCHOSES	5	5	0	5	5	0	0	0	0	0	0	0
294	OTHER ORGANIC PSYCHOTIC CONDITIONS (CHRONIC)	11	6	5	11	6	5	0	0	0	0	0	0
295-299	OTHER PSYCHOSES	689	189	500	669	183	486	17	6	11	3	0	3
295	SCHIZOPHRENIC DISORDERS	13	6	7	13	6	7	0	0	0	0	0	0
296	AFFECTIVE PSYCHOSES	4	1	3	4	1	3	0	0	0	0	0	0
298	OTHER NONORGANIC PSYCHOSES	672	182	490	652	176	476	17	6	11	3	0	3
300-316	NEUROSES, PERSONALITY DISORDERS, AND OTHER NONPSYCHOTIC DISORDERS	335	172	163	315	159	156	18	11	7	1	1	0
300	NEUROTIC DISORDERS	2	1	1	2	1	1	0	0	0	0	0	0
303	ALCOHOL DEPENDENCE SYNDROME	123	99	24	109	90	19	12	7	5	1	1	0
304	DRUG DEPENDENCE	3	2	1	2	2	0	1	0	1	0	0	0
305	NONDEPENDENT ABUSE OF DRUGS	29	22	7	24	18	6	5	4	1	0	0	0
307	SPECIAL SYMPTOMS OR SYNDROMES NEC	4	2	2	4	2	2	0	0	0	0	0	0
308	ACUTE REACTION TO STRESS	1	1	0	1	1	0	0	0	0	0	0	0
310	SPEC NONPSYCH MENTAL DIS DUE TO ORGANIC BRAIN DAMAGE	143	38	105	143	38	105	0	0	0	0	0	0
311	DEPRESSIVE DISORDER NEC	30	7	23	30	7	23	0	0	0	0	0	0
317-319	MENTAL RETARDATION	11	4	7	10	4	6	1	0	1	0	0	0
319	UNSPECIFIED MENTAL RETARDATION	11	4	7	10	4	6	1	0	1	0	0	0
*320 389	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	1581	641	940	1538	621	917	33	13	20	10	7	3
320-326	INFLAMMATORY DISEASES OF THE CENTRAL NERVOUS SYSTEM	20	8	12	14	7	7	4	0	4	2	1	1
320	BACTERIAL MENINGITIS	2	1	1	2	1	1	0	0	0	0	0	0
322	MENINGITIS OF UNSPECIFIED CAUSE	6	5	1	6	5	1	0	0	0	0	0	0
323	ENCEPHALITIS, MYELITIS & ENCEPHALOMYELITIS	7	1	6	4	0	4	2	0	2	1	1	0
324	INTRACRANIAL & INTRASPINAL ABCESS	3	1	2	1	1	0	1	0	1	1	0	1
326	LATE EFF INTRACRANIAL ABCESS OR PYOGENIC INFECTION	2	0	2	1	0	1	1	0	1	0	0	0
330-337	HEREDITARY AND DEGENERATIVE DISEASES OF NERVOUS SYSTEM	1244	490	754	1219	475	744	17	9	8	8	6	2
330	CEREBRAL DEGENERATIONS USUALLY MANIFEST IN CHILDHOOD	3	3	0	3	3	0	0	0	0	0	0	0
331	OTHER CEREBRAL DEGENERATIONS	698	202	496	688	199	489	9	3	6	1	0	1
332	PARKINSON'S DISEASE	359	192	167	350	186	164	6	4	2	3	2	1
333	OTH EXTRAPYRAMIDAL DISEASE & ABN MOVEMENT DISORDERS	38	18	20	36	16	20	0	0	0	2	2	0
334	SPINOCEREBELLAR DISEASE	6	2	4	6	2	4	0	0	0	0	0	0
335	ANTERIOR HORN CELL DISEASE	133	70	63	129	66	63	2	2	0	2	2	0
336	OTHER DISEASES OF SPINAL CORD	6	3	3	6	3	3	0	0	0	0	0	0
337	DISORDERS OF AUTONOMIC NERVOUS SYSTEM	1	0	1	1	0	1	0	0	0	0	0	0
340-349	OTHER DISORDERS OF THE CENTRAL NERVOUS SYSTEM	221	98	123	213	94	119	8	4	4	0	0	0
340	MULTIPLE SCLEROSIS	63	20	43	60	18	42	3	2	1	0	0	0
342	HEMIPLEGIA	4	4	0	4	4	0	0	0	0	0	0	0
343	INFANTILE CEREBRAL PALSY	12	5	7	12	5	7	0	0	0	0	0	0
344	OTHER PARALYTIC SYNDROMES	14	7	7	14	7	7	0	0	0	0	0	0
345	EPILEPSY	17	7	10	16	7	9	1	0	1	0	0	0
348	OTHER CONDITIONS OF BRAIN	98	47	51	95	46	49	3	1	2	0	0	0
349	OTHER & UNSPECIFIED DISORDERS OF NERVOUS SYSTEM	13	8	5	12	7	5	1	1	0	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	BLACK TOT	BLACK MALE	BLACK FEM	OTHER TOT	OTHER MALE	OTHER FEM
	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (CONTINUED)												
350-359	DISORDERS OF PERIPHERAL NERVOUS SYSTEM	94	45	49	90	45	45	4	0	4	0	0	0
354	MONONEURITIS UPPER LIMB & MONONEURITIS MULTIPLEX	1	0	1	1	0	1	0	0	0	0	0	0
355	MONONEURITIS LOWER LIMB	3	3	0	3	3	0	0	0	0	0	0	0
356	HEREDITARY & IDIOPATHIC PERIPHERAL NEUROPATHY	50	22	28	46	22	24	4	0	4	0	0	0
357	INFLAMMATORY & TOXIC NEUROPATHY	6	2	4	6	2	4	0	0	0	0	0	0
358	MYONEURAL DISORDERS	10	5	5	10	5	5	0	0	0	0	0	0
359	MUSCULAR DYSTROPHIES & OTHER MYOPATHIES	24	13	11	24	13	11	0	0	0	0	0	0
380-389	DISEASES OF THE EAR AND MASTIOD PROCESS	2	0	2	2	0	2	0	0	0	0	0	0
382	SUPPURATIVE & UNSPECIFIED OTITIS MEDIA	1	0	1	1	0	1	0	0	0	0	0	0
383	MASTOIDITIS & RELATED CONDITIONS	1	0	1	1	0	1	0	0	0	0	0	0
*390 459	VII. DISEASES OF THE CIRCULATORY SYSTEM	20818	9218	11600	20017	8829	11188	649	307	342	151	81	70
390-392	ACUTE RHEUMATIC FEVER	2	0	2	2	0	2	0	0	0	0	0	0
391	RHEUMATIC FEVER WITH HEART INVOLVEMENT	2	0	2	2	0	2	0	0	0	0	0	0
393-398	CHRONIC RHEUMATIC HEART DISEASE	97	32	65	96	31	65	1	1	0	0	0	0
394	DISEASES OF MITRAL VALVE	49	14	35	48	13	35	1	1	0	0	0	0
395	DISEASES OF AORTIC VALVE	2	0	2	2	0	2	0	0	0	0	0	0
396	DISEASES OF MITRAL AND AORTIC VALVES	20	10	10	20	10	10	0	0	0	0	0	0
397	DISEASES OF OTHER ENDOCARDIAL STRUCTURES	5	2	3	5	2	3	0	0	0	0	0	0
398	OTHER RHEUMATIC HEART DISEASE	21	6	15	21	6	15	0	0	0	0	0	0
401-405	HYPERTENSIVE DISEASE	645	237	408	589	211	378	43	20	23	13	6	7
401	ESSENTIAL HYPERTENSION	218	71	147	206	66	140	7	3	4	5	2	3
402	HYPERTENSIVE HEART DISEASE	289	115	174	265	103	162	20	10	10	4	2	2
403	HYPERTENSIVE RENAL DISEASE	108	38	70	92	33	59	13	4	9	3	1	2
404	HYPERTENSIVE HEART & RENAL DISEASE	30	13	17	26	9	17	3	3	0	1	1	0
410-414	ISCHEMIC HEART DISEASE	9788	4747	5041	9466	4585	4881	257	123	134	65	39	26
410	ACUTE MYOCARDIAL INFARCTION	4273	2086	2187	4124	2012	2112	116	58	58	33	16	17
411	OTH ACUTE & SUBACUTE FORMS OF ISCHEMIC HEART DIS	10	3	7	10	3	7	0	0	0	0	0	0
412	OLD MYOCARDIAL INFARCTION	9	6	3	9	6	3	0	0	0	0	0	0
413	ANGINA PECTORIS	20	8	12	20	8	12	0	0	0	0	0	0
414	OTHER FORMS OF CHRONIC ISCHEMIC HEART DISEASE	5476	2644	2832	5303	2556	2747	141	65	76	32	23	9
415-417	DISEASES OF PULMONARY CIRCULATION	276	91	185	252	83	169	24	8	16	0	0	0
415	ACUTE PULMONARY HEART DISEASE	182	62	120	164	54	110	18	8	10	0	0	0
416	CHRONIC PULMONARY HEART DISEASE	92	29	63	86	29	57	6	0	6	0	0	0
417	OTHER DISEASES OF PULMONARY CIRCULATION	2	0	2	2	0	2	0	0	0	0	0	0
420-429	OTHER FORMS OF HEART DISEASE	5516	2420	3096	5291	2307	2984	188	94	94	36	18	18
420	ACUTE PERICARDITIS	1	0	1	1	0	1	0	0	0	0	0	0
421	ACUTE & SUBACUTE ENDOCARDITIS	19	9	10	19	9	10	0	0	0	0	0	0
422	ACUTE MYOCARDITIS	6	2	4	4	2	2	2	0	2	0	0	0
423	OTHER DISEASES OF PERICARDIUM	11	7	4	9	5	4	2	2	0	0	0	0
424	OTHER DISEASES OF ENDOCARDIUM	503	173	330	487	168	319	14	4	10	2	1	1
425	CARDIOMYOPATHY	527	320	207	500	305	195	21	11	10	6	4	2
426	CONDUCTION DISORDERS	24	11	13	23	10	13	1	1	0	0	0	0
427	CARDIAC DYSRHYTHMIAS	1646	707	939	1577	678	899	54	22	32	15	7	8
428	HEART FAILURE	1614	566	1048	1566	546	1020	43	18	25	5	2	3
429	ILL-DEFINED DESCRIPTIONS & COMPLICATIONS HEART DIS	1165	625	540	1105	584	521	51	36	15	8	4	4

TABLE C-15 (CONTINUED)

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ICD. LIST NUMBER	CAUSE OF DEATH	T O T A L S			W H I T E			B L A C K			O T H E R		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	VII. DISEASES OF THE CIRCULATORY SYSTEM (CONTINUED)												
430-438	CEREBROVASCULAR DISEASE	3321	1182	2139	3191	1121	2070	97	45	52	33	16	17
430	SUBARACHNOID HEMORRHAGE	130	49	81	117	44	73	5	3	2	8	2	6
431	INTRACEREBRAL HEMORRHAGE	417	166	251	395	156	239	16	8	8	6	2	4
432	OTH & UNSPECIFIED INTRACRANIAL HEMORRHAGE	115	54	61	107	50	57	5	2	3	3	2	1
433	OCCLUSION & STENOSIS OF PRECEREBRAL ARTERIES	26	11	15	26	11	15	0	0	0	0	0	0
434	OCCLUSION OF CEREBRAL ARTERIES	251	77	174	243	73	170	7	3	4	1	1	0
435	TRANSIENT CEREBRAL ISCHEMIA	6	2	4	5	1	4	1	1	0	0	0	0
436	ACUTE BUT ILL-DEFINED CEREBROVASCULAR DISEASE	1715	578	1137	1656	552	1104	50	20	30	9	6	3
437	OTH & ILL-DEFINED CEREBROVASCULAR DISEASE	306	110	196	300	107	193	6	3	3	0	0	0
438	LATE EFFECTS OF CEREBROVASCULAR DISEASE	355	135	220	342	127	215	7	5	2	6	3	3
440-448	DISEASES OF ARTERIES, ARTERIOLES, AND CAPILLARIES	1036	445	591	1002	433	569	31	10	21	3	2	1
440	ATHEROSCLEROSIS	344	126	218	338	124	214	4	1	3	2	1	1
441	AORTIC ANEURYSM	395	209	186	380	203	177	14	5	9	1	1	0
442	OTHER ANEURYSM	12	7	5	11	7	4	1	0	1	0	0	0
443	OTHER PERIPHERAL VASCULAR DISEASE	212	75	137	201	71	130	11	4	7	0	0	0
444	ARTERIAL EMBOLISM & THROMBOSIS	24	6	18	24	6	18	0	0	0	0	0	0
446	POLYARTERITIS NODOSA & ALLIED CONDITIONS	19	10	9	19	10	9	0	0	0	0	0	0
447	OTHER DISORDERS OF ARTERIES & ARTERIOLES	29	12	17	28	12	16	1	0	1	0	0	0
448	DISEASE OF CAPILLARIES	1	0	1	1	0	1	0	0	0	0	0	0
451-459	DISEASES OF VEINS AND LYMPHATICS, AND OTHER DIS. OF CIRCULATORY SYS.	137	64	73	128	58	70	8	6	2	1	0	1
451	PHLEBITIS & THROMBOPHLEBITIS	15	7	8	13	5	8	2	2	0	0	0	0
452	PORTAL VEIN THROMBOSIS	3	1	2	3	1	2	0	0	0	0	0	0
453	OTHER VENOUS EMBOLISM & THROMBOSIS	7	2	5	6	1	5	1	1	0	0	0	0
454	VARICOSE VEINS OF LOWER EXTREMITIES	5	4	1	5	4	1	0	0	0	0	0	0
456	VARICOSE VEINS OF OTHER SITES	8	4	4	7	3	4	1	1	0	0	0	0
458	HYPOTENSION	65	27	38	61	25	36	4	2	2	0	0	0
459	OTHER DISORDERS OF CIRCULATORY SYSTEM	34	19	15	33	19	14	0	0	0	1	0	1
*460 519	VIII. DISEASES OF THE RESPIRATORY SYSTEM	6514	2843	3671	6312	2742	3570	147	77	70	55	24	31
460-466	ACUTE RESPIRATORY INFECTIONS	14	3	11	12	1	11	2	2	0	0	0	0
464	ACUTE LARYNGITIS & TRACHEITIS	1	0	1	1	0	1	0	0	0	0	0	0
465	ACUTE UPPER RESP INF MULTIPLE OR UNSPECF SITES	5	0	5	5	0	5	0	0	0	0	0	0
466	ACUTE BRONCHITIS AND BRONCHIOLITIS	8	3	5	6	1	5	2	2	0	0	0	0
470-478	OTHER DISEASES UPPER RESPIRATORY TRACT	6	3	3	5	2	3	1	1	0	0	0	0
478	OTHER DISEASES OF UPPER RESPIRATORY TRACT	6	3	3	5	2	3	1	1	0	0	0	0
480-487	PNEUMONIA AND INFLUENZA	2897	1174	1723	2820	1140	1680	56	27	29	21	7	14
480	VIRAL PNEUMONIA	9	1	8	9	1	8	0	0	0	0	0	0
481	PNEUMOCOCCAL PNEUMONIA	62	28	34	57	25	32	4	2	2	1	1	0
482	OTHER BACTERIAL PNEUMONIA	78	40	38	76	40	36	2	0	2	0	0	0
485	BRONCHOPNEUMONIA ORGANISM UNSPECIFIED	103	36	67	101	35	66	1	0	1	1	1	0
486	PNEUMONIA ORGANISM UNSPECIFIED	2608	1057	1551	2541	1028	1513	49	25	24	18	4	14
487	INFLUENZA	37	12	25	36	11	25	0	0	0	1	1	0
490-496	CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS	2542	1153	1389	2475	1120	1355	47	23	24	20	10	10
490	BRONCHITIS NOT SPECF AS ACUTE OR CHRONIC	17	9	8	15	8	7	2	1	1	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	BLACK TOT	BLACK MALE	BLACK FEM	OTHER TOT	OTHER MALE	OTHER FEM
	VIII. DISEASES OF THE RESPIRATORY SYSTEM (CONTINUED)												
491	CHRONIC BRONCHITIS	41	15	26	41	15	26	0	0	0	0	0	0
492	EMPHYSEMA	352	164	188	344	161	183	4	1	3	4	2	2
493	ASTHMA	119	37	82	105	31	74	11	5	6	3	1	2
494	BRONCHIECTASIS	22	8	14	22	8	14	0	0	0	0	0	0
496	CHRONIC AIRWAY OBSTRUCTION NEC	1991	920	1071	1948	897	1051	30	16	14	13	7	6
500-508	PNEUMOCONIOSES AND OTHER LUNG DISEASES DUE TO EXTERNAL AGENTS	497	243	254	471	227	244	19	13	6	7	3	4
501	ASBESTOSIS	16	16	0	16	16	0	0	0	0	0	0	0
502	PNEUMOCONIOSIS DUE TO OTH SILICA,SILICATES	3	2	1	2	1	1	1	1	0	0	0	0
507	PNEUMONITIS DUE TO SOLIDS & LIQUIDS	477	224	253	452	209	243	18	12	6	7	3	4
508	RESP CONDITIONS DUE TO OTH & UNSPECF EXT AGENTS	1	1	0	1	1	0	0	0	0	0	0	0
510-519	OTHER DISEASES OF RESPIRATORY SYSTEM	558	267	291	529	252	277	22	11	11	7	4	3
510	EMPYEMA	10	5	5	10	5	5	0	0	0	0	0	0
511	PLEURISY	27	12	15	24	11	13	2	1	1	1	0	1
512	PNEUMOTHORAX	5	0	5	4	0	4	1	0	1	0	0	0
513	ABSCESS OF LUNG & MEDIASTINUM	9	4	5	8	4	4	1	0	1	0	0	0
514	PULMONARY CONGESTION AND HYPOSTASIS	24	10	14	23	9	14	0	0	0	1	1	0
515	POSTINFLAMMATORY PULMONARY FIBROSIS	218	119	99	206	112	94	8	4	4	4	3	1
516	OTH ALVEOLAR & PARIETOALVEOLAR PNEUMONOPATHY	17	10	7	17	10	7	0	0	0	0	0	0
518	OTHER DISEASES OF LUNG	227	99	128	216	93	123	10	6	4	1	0	1
519	OTHER DISEASES OF RESPIRATORY SYSTEM	21	8	13	21	8	13	0	0	0	0	0	0
*520 579	IX. DISEASES OF THE DIGESTIVE SYSTEM	2066	1015	1051	1974	964	1010	69	42	27	23	9	14
520-529	DISEASES OF ORAL CAVITY, SALIVARY GLANDS AND JAWS	3	1	2	3	1	2	0	0	0	0	0	0
527	DISEASES OF THE SALIVARY GLANDS	2	0	2	2	0	2	0	0	0	0	0	0
528	DIS ORAL SOFT TISSUES EXCL LESIONS GINGIVA & TONGUE	1	1	0	1	1	0	0	0	0	0	0	0
530-537	DISEASES OF ESOPHAGUS, STOMACH, AND DUODENUM	136	67	69	131	65	66	4	2	2	1	0	1
530	DISEASES OF ESOPHAGUS	43	20	23	41	19	22	2	1	1	0	0	0
531	GASTRIC ULCER	14	6	8	14	6	8	0	0	0	0	0	0
532	DUODENAL ULCER	37	21	16	36	20	16	1	1	0	0	0	0
533	PEPTIC ULCER SITE UNSPECF	21	10	11	20	10	10	0	0	0	1	0	1
535	GASTRITIS & DUODENITIS	11	7	4	10	7	3	1	0	1	0	0	0
536	DISORDERS OF FUNCTION OF STOMACH	1	0	1	1	0	1	0	0	0	0	0	0
537	OTHER DISORDERS OF STOMACH & DUODENUM	9	3	6	9	3	6	0	0	0	0	0	0
540-543	APPENDICITIS	9	5	4	9	5	4	0	0	0	0	0	0
540	ACUTE APPENDICITIS	7	4	3	7	4	3	0	0	0	0	0	0
541	APPENDICITIS,UNQUALIFIED	1	0	1	1	0	1	0	0	0	0	0	0
543	OTHER DISEASES OF APPENDIX	1	1	0	1	1	0	0	0	0	0	0	0
550-553	HERNIA OF ABDOMINAL CAVITY	32	11	21	30	11	19	2	0	2	0	0	0
550	INGUINAL HERNIA	4	3	1	4	3	1	0	0	0	0	0	0
551	OTH HERNIA OF ABDOMINAL CAVITY WITH GANGRENE	4	0	4	3	0	3	1	0	1	0	0	0
552	OTH HERNIA ABD CAVITY W OBSTRUCT BUT W/O GANGRENE	18	5	13	17	5	12	1	0	1	0	0	0
553	OTH HERNIA ABD CAVITY W/O OBSTRUCT OR GANGRENE	6	3	3	6	3	3	0	0	0	0	0	0
555-558	NONINFECTIVE ENTERITIS AND COLITIS	279	88	191	261	76	185	17	12	5	1	0	1
555	REGIONAL ENTERITIS	12	3	9	11	3	8	1	0	1	0	0	0

TABLE C-15 (CONTINUED)

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	BLACK TOT	BLACK MALE	BLACK FEM	OTHER TOT	OTHER MALE	OTHER FEM
	IX. DISEASES OF THE DIGESTIVE SYSTEM (CONTINUED)												
556	IDIOPATHIC PROCTOCOLITIS	17	11	6	16	10	6	1	1	0	0	0	0
557	VASCULAR INSUFFICIENCY OF INTESTINE	209	63	146	195	54	141	13	9	4	1	0	1
558	OTH NONINFECTIOUS GASTROENTERITIS & COLITIS	41	11	30	39	9	30	2	2	0	0	0	0
560-569	OTHER DISEASES OF INTESTINE AND PERITONEUM	366	124	242	351	116	235	10	6	4	5	2	3
560	INTESTINAL OBSTRUCTION W/O MENTION OF HERNIA	151	45	106	147	43	104	2	1	1	2	1	1
562	DIVERTICULA OF INTESTINE	76	22	54	75	22	53	1	0	1	0	0	0
564	FUNCTIONAL DIGESTIVE DISORDERS NEC	12	5	7	12	5	7	0	0	0	0	0	0
565	ANAL FISSURE & FISTULA	1	0	1	1	0	1	0	0	0	0	0	0
566	ABSCESS OF ANAL AND RECTAL REGIONS	2	1	1	1	0	1	1	1	0	0	0	0
567	PERITONITIS	56	22	34	52	21	31	3	1	2	1	0	1
568	OTHER DISORDERS OF PERITONEUM	4	2	2	3	1	2	1	1	0	0	0	0
569	OTHER DISORDERS OF INTESTINE	64	27	37	60	24	36	2	2	0	2	1	1
570-579	OTHER DISEASES OF DIGESTIVE SYSTEM	1241	719	522	1189	690	499	36	22	14	16	7	9
570	ACUTE & SUBACUTE NECROSIS OF LIVER	2	0	2	2	0	2	0	0	0	0	0	0
571	CHRONIC LIVER DISEASE & CIRRHOSIS	574	383	191	554	368	186	14	12	2	6	3	3
572	LIVER ABSCESS & SEQUELAE OF CHRONIC LIVER DISEASE	173	105	68	171	105	66	2	0	2	0	0	0
573	OTHER DISORDERS OF LIVER	79	40	39	67	34	33	8	4	4	4	2	2
574	CHOLELITHIASIS	22	5	17	22	5	17	0	0	0	0	0	0
575	OTHER DISORDERS OF GALLBLADDER	37	17	20	35	16	19	1	0	1	1	1	0
576	OTHER DISORDERS OF BILIARY TRACT	28	14	14	27	14	13	0	0	0	1	0	1
577	DISEASES OF PANCREAS	78	38	40	71	35	36	6	3	3	1	0	1
578	GASTROINTESTINAL HEMORRHAGE	245	116	129	238	112	126	5	3	2	2	1	1
579	INTESTINAL MALABSORPTION	3	1	2	2	1	1	0	0	0	1	0	1
*580 629	X. DISEASES OF THE GENITOURINARY SYSTEM	1436	619	817	1349	587	762	69	25	44	18	7	11
580-589	NEPHRITIS AND NEPHROSIS	919	428	491	867	405	462	39	17	22	13	6	7
580	ACUTE GLOMERULONEPHRITIS	1	0	1	1	0	1	0	0	0	0	0	0
581	NEPHROTIC SYNDROME	5	1	4	5	1	4	0	0	0	0	0	0
582	CHRONIC GLOMERULONEPHRITIS	27	9	18	24	8	16	2	1	1	1	0	1
583	NEPHRITIS & NEPHROPATHY NOT SPECF AS ACUTE/CHRONIC	5	2	3	5	2	3	0	0	0	0	0	0
584	ACUTE RENAL FAILURE	154	51	103	149	50	99	3	1	2	2	0	2
585	CHRONIC RENAL FAILURE	207	105	102	199	101	98	6	4	2	2	0	2
586	RENAL FAILURE, UNSPECIFIED	517	258	259	481	241	240	28	11	17	8	6	2
587	RENAL SCLEROSIS, UNSPECIFIED	2	2	0	2	2	0	0	0	0	0	0	0
588	DISORDERS RESULTING FROM IMPAIRED RENAL FUNCTION	1	0	1	1	0	1	0	0	0	0	0	0
590-599	OTHER DISEASES OF URINARY SYSTEM	500	180	320	465	171	294	30	8	22	5	1	4
590	INFECTIONS OF KIDNEY	5	0	5	5	0	5	0	0	0	0	0	0
591	HYDRONEPHROSIS	3	0	3	3	0	3	0	0	0	0	0	0
592	CALCULUS OF KIDNEY & URETER	5	0	5	5	0	5	0	0	0	0	0	0
593	OTHER DISORDERS OF KIDNEY & URETER	134	67	67	115	60	55	17	6	11	2	1	1
596	OTHER DISORDERS OF BLADDER	2	1	1	2	1	1	0	0	0	0	0	0
598	URETHRAL STRICTURE	1	1	0	0	0	0	1	1	0	0	0	0
599	OTHER DISORDERS OF URETHRA & URINARY TRACT	350	111	239	335	110	225	12	1	11	3	0	3
600-608	DISEASES OF MALE GENITAL ORGANS	11	11	0	11	11	0	0	0	0	0	0	0
600	HYPERPLASIA OF PROSTATE	4	4	0	4	4	0	0	0	0	0	0	0
602	OTHER DISORDERS OF PROSTATE	3	3	0	3	3	0	0	0	0	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	X. DISEASES OF THE GENITOURINARY SYSTEM (CONTINUED)												
608	OTHER DISORDERS OF MALE GENITAL ORGANS	4	4	0	4	4	0	0	0	0	0	0	0
610-611	DISORDERS OF BREAST	1	0	1	1	0	1	0	0	0	0	0	0
611	OTHER DISORDERS OF BREAST	1	0	1	1	0	1	0	0	0	0	0	0
614-616	INFLAMMATORY DISEASE OF FEMALE PELVIC ORGANS	1	0	1	1	0	1	0	0	0	0	0	0
614	INFLAMM DIS OVARY,FALLP TUBE, PELV TISS,PERITONEUM	1	0	1	1	0	1	0	0	0	0	0	0
617-629	OTHER DISORDERS OF FEMALE GENITAL TRACT	4	0	4	4	0	4	0	0	0	0	0	0
618	GENITAL PROLAPSE	1	0	1	1	0	1	0	0	0	0	0	0
619	FISTULA INVOLVING FEMALE GENITAL TRACT	1	0	1	1	0	1	0	0	0	0	0	0
620	NONINFLAMM DIS OF OVARY,FALLOP TUBE & BROAD LIG	1	0	1	1	0	1	0	0	0	0	0	0
623	NONINFLAMM DISORDERS OF VAGINA	1	0	1	1	0	1	0	0	0	0	0	0
*630 676	XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND PUERPERIUM	2	0	2	2	0	2	0	0	0	0	0	0
640-648	COMPLICATIONS MAINLY RELATED TO PREGNANCY	1	0	1	1	0	1	0	0	0	0	0	0
641	ANTEPART HEMORHGE,ABRUPTIO PLACENTAE,PLACENTA PREVIA	1	0	1	1	0	1	0	0	0	0	0	0
670-676	COMPLICATIONS OF THE PUERPERIUM	1	0	1	1	0	1	0	0	0	0	0	0
673	OBSTETRICAL PULMONARY EMBOLISM	1	0	1	1	0	1	0	0	0	0	0	0
*680 709	XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	69	26	43	64	25	39	5	1	4	0	0	0
680-686	INFECTIONS OF SKIN AND SUBCUTANEOUS TISSUE	27	11	16	26	11	15	1	0	1	0	0	0
682	OTHER CELLULITIS & ABSCESS	21	8	13	20	8	12	1	0	1	0	0	0
686	OTH LOCAL INFECTIONS SKIN & SUBCUTANEOUS TISSUE	6	3	3	6	3	3	0	0	0	0	0	0
690-698	OTHER INFLAMMATORY CONDITIONS OF SKIN AND SUBCUTANEOUS TISSUE	10	3	7	9	2	7	1	1	0	0	0	0
694	BULLOUS DERMATOSES	5	1	4	5	1	4	0	0	0	0	0	0
695	ERYTHEMATOUS CONDITIONS	5	2	3	4	1	3	1	1	0	0	0	0
700-709	OTHER DISEASES OF SKIN AND SUBCUTANEOUS TISSUE	32	12	20	29	12	17	3	0	3	0	0	0
707	CHRONIC ULCER OF SKIN	32	12	20	29	12	17	3	0	3	0	0	0
*710 739	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	184	39	145	173	36	137	10	2	8	1	1	0
710-719	ARTHROPATHIES AND RELATED DISORDERS	112	15	97	104	13	91	8	2	6	0	0	0
710	DIFFUSE DISEASES OF CONNECTIVE TISSUE	54	7	47	48	6	42	6	1	5	0	0	0
711	ARTHROPATHY ASSOC WITH INFECTIONS	3	1	2	2	0	2	1	1	0	0	0	0
714	RHEUMATOID ARTHRITIS & OTH INFLM POLYARTHROPATHIES	34	6	28	33	6	27	1	0	1	0	0	0
715	OSTEOARTHROSIS & ALLIED DISORDERS	15	1	14	15	1	14	0	0	0	0	0	0
716	OTHER & UNSPECIFIED ARTHROPATHIES	6	0	6	6	0	6	0	0	0	0	0	0
720-724	DORSOPATHIES	4	2	2	4	2	2	0	0	0	0	0	0
720	ANKYLOSING SPONDYLITIS & OTH INFLM SPONDYLOPATHIES	1	0	1	1	0	1	0	0	0	0	0	0
721	SPONDYLOSIS & ALLIED DISORDERS	2	2	0	2	2	0	0	0	0	0	0	0
722	INTERVERTEBRAL DISC DISORDERS	1	0	1	1	0	1	0	0	0	0	0	0
725-729	RHEUMATISM, EXCLUDING THE BACK	18	9	9	17	8	9	0	0	0	1	1	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (CONTINUED)												
725	POLYMYALGIA RHEUMATICA	1	0	1	1	0	1	0	0	0	0	0	0
728	DISORDERS OF MUSCLE, LIGAMENT & FASCIA	9	5	4	8	4	4	0	0	0	1	1	0
729	OTHER DISORDERS OF SOFT TISSUES	8	4	4	8	4	4	0	0	0	0	0	0
730-739	OSTEOPATHIES CHRONDROPATHIES & ACQUIRED MUSCULOSKELATAL DEFORMITIES	50	13	37	48	13	35	2	0	2	0	0	0
730	OSTEOMYELITIS, PERIOSTITIS & OTH INFECTIONS OF BONE	17	7	10	15	7	8	2	0	2	0	0	0
731	OSTEITIS DEFORMANS & OSTEOPATHIES ASSOC W OTH DIS CE	2	1	1	2	1	1	0	0	0	0	0	0
732	OSTEOCHONDROPATHIES	1	0	1	1	0	1	0	0	0	0	0	0
733	OTHER DISORDERS OF BONE & CARTILAGE	25	3	22	25	3	22	0	0	0	0	0	0
737	CURVATURE OF SPINE	5	2	3	5	2	3	0	0	0	0	0	0
*740 759	XIV. CONGENITAL ANOMALIES	203	103	100	190	94	96	9	7	2	4	2	2
740	ANENCEPHALUS & SIMLIAR ANOMALIES	3	1	2	3	1	2	0	0	0	0	0	0
741	SPINA BIFIDA	3	3	0	3	3	0	0	0	0	0	0	0
742	OTHER CONGENITAL ANOMALIES OF NERVOUS SYSTEM	52	26	26	52	26	26	0	0	0	0	0	0
745	BULBUS CORDIS ANOMS & ANOMS CARDIAC SEPTAL CLOSURE	26	11	15	22	8	14	3	2	1	1	1	0
746	OTHER CONGENITAL ANOMALIES OF HEART	29	19	10	26	17	9	3	2	1	0	0	0
747	OTHER CONGENITAL ANOMS OF CIRCULATORY SYSTEM	15	7	8	13	6	7	1	1	0	1	0	1
748	CONGENITAL ANOMALIES OF RESPIRATORY SYSTEM	18	9	9	17	8	9	1	1	0	0	0	0
750	OTHER CONGENITAL ANOMS UPPER ALIMENTARY TRACT	1	0	1	1	0	1	0	0	0	0	0	0
751	OTHER CONGENITAL ANOMS OF DIGESTIVE SYSTEM	2	1	1	2	1	1	0	0	0	0	0	0
753	CONGENITAL ANOMS OF URINARY SYSTEM	12	6	6	11	5	6	1	1	0	0	0	0
756	OTHER CONGENITAL MUSCULOSKELETAL ANOMALIES	7	4	3	7	4	3	0	0	0	0	0	0
757	CONGENITAL ANOMS OF THE INTEGUMENT	1	0	1	1	0	1	0	0	0	0	0	0
758	CHROMOSONAL ANOMALIES	25	9	16	23	8	15	0	0	0	2	1	1
759	OTHER & UNSPECIFIED CONGENITAL ANOMALIES	9	7	2	9	7	2	0	0	0	0	0	0
*760 779	XV. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD	236	126	110	190	103	87	40	19	21	6	4	2
760	NEWBORN AFFECTD BY MAT CONDS REL/UNREL TO PREG	6	4	2	5	4	1	1	0	1	0	0	0
761	NEWBORN AFFECTED BY MAT COMPLICATIONS OF PREG	35	18	17	31	16	15	4	2	2	0	0	0
762	NEWBORN AFFECTD COMPLIC PLACENTA, CORD, MEMBRANE	28	13	15	22	10	12	5	2	3	1	1	0
763	NEWBORN AFFECTED OTH COMPLIC LABOR & DELIVERY	4	2	2	4	2	2	0	0	0	0	0	0
765	DISORDERS REL TO SHORT GESTATION & UNSPECF LOW BIRTHWT	53	27	26	40	20	20	12	7	5	1	0	1
767	BIRTH TRAUMA	3	1	2	3	1	2	0	0	0	0	0	0
768	INTRAUTERINE HYPOXIA & BIRTH ASPHYXIA	11	9	2	8	7	1	3	2	1	0	0	0
769	RESPIRATORY DISTRESS SYNDROME	16	11	5	13	9	4	1	1	0	2	1	1
770	OTHER RESPIRATORY CONDITIONS OF NEWBORN	30	17	13	25	15	10	4	1	3	1	1	0
771	INFECTIONS SPECIFIC TO THE PERINATAL PERIOD	16	5	11	8	2	6	7	2	5	1	1	0
772	NEONATAL HEMORRHAGE	8	5	3	7	4	3	1	1	0	0	0	0
777	PERINATAL DISORDERS OF DIGESTIVE SYSTEM	4	1	3	2	0	2	2	1	1	0	0	0
778	COND INVOLV INTEGUMENT/TEMP REGULATION OF NEWBORN	3	3	0	3	3	0	0	0	0	0	0	0
779	OTH & ILL-DEFINED COND ORIGINATING IN PERINATAL PERIOD	19	10	9	19	10	9	0	0	0	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*780 799	XVI. SYMPTOMS SIGNS, AND ILL-DEFINED CONDITIONS	570	226	344	536	207	329	22	12	10	6	3	3
780-789	SYMPTOMS												
780	GENERAL SYMPTOMS	102	39	63	98	36	62	3	2	1	1	1	0
781	SYMPTOMS INVOLVING NERVOUS & MUSCULOSKELETAL SYS	18	10	8	17	10	7	1	0	1	0	0	0
782	SYMPTOMS INVOLVING SKIN & OTH INTEGUMENTARY TISSUE	2	0	2	2	0	2	0	0	0	0	0	0
783	SYMPTOMS RE NUTRITION, METABOLISM & DEVELOPMENT	1	1	0	1	1	0	0	0	0	0	0	0
784	SYMPTOMS INVOLVING HEAD & NECK	25	5	20	25	5	20	0	0	0	0	0	0
785	SYMPTOMS INVOLVING CARDIOVASCULAR SYSTEM	1	1	0	1	1	0	0	0	0	0	0	0
786	SYMPTOMS INVOLVING RESP SYS & OTHER CHEST SYMPTOMS	42	18	24	40	16	24	1	1	0	1	1	0
787	SYMPTOMS INVOLVING DIGESTIVE SYSTEM	5	3	2	4	2	2	1	1	0	0	0	0
789	OTHER SYMPTOMS INVOLVING ABDOMEN & PELVIS	1	0	1	1	0	1	0	0	0	0	0	0
790-796	NONSPECIFIC ABNORMAL FINDINGS	7	1	6	7	1	6	0	0	0	0	0	0
790	NONSPECIFIC FINDINGS ON EXAMINATION OF BLOOD	5	3	2	5	3	2	0	0	0	0	0	0
797-799	ILL-DEFINED AND UNKNOWN CAUSES OF MORBIDITY AND MORTALITY	5	3	2	5	3	2	0	0	0	0	0	0
		463	184	279	433	168	265	19	10	9	5	2	3
797	SENILITY W/O MENTION OF PSYCHOSIS	19	2	17	19	2	17	0	0	0	0	0	0
798	SUDDEN DEATH, CAUSE UNKNOWN	25	20	5	20	16	4	5	4	1	0	0	0
799	OTH ILL-DEFINED & UNK CAUSES OF MORBIDITY/MORTALITY	419	162	257	394	150	244	14	6	8	5	2	3
*800 999	XVII. EXTERNAL CAUSES OF INJURY AND POISONING	2413	1604	809	2247	1480	767	130	99	31	33	22	11
800-807	RAILWAY ACCIDENTS	7	5	2	7	5	2	0	0	0	0	0	0
805	HIT BY ROLLING STOCK	7	5	2	7	5	2	0	0	0	0	0	0
810-819	MOTOR VEHICLE TRAFFIC ACCIDENTS	473	312	161	440	291	149	28	17	11	4	3	1
812	OTHER M/V TRAFFIC ACCIDENT INVOLVING COLLISION W/ M/V	91	50	41	87	47	40	4	3	1	0	0	0
813	M/V TRAFFIC ACCIDENT INVOLV COLLISION W/ OTH VEHICLE	5	4	1	5	4	1	0	0	0	0	0	0
814	M/V TRAFFIC ACCIDENT INVOLVING COLLISION W/ PEDESTRIAN	97	63	34	90	59	31	6	4	2	1	0	1
815	OTHER M/V TRAFFIC ACCIDENT INVOLV COLLISION ON HIGHWAY	113	83	30	106	79	27	6	3	3	1	1	0
816	M/V TRAFF ACC DUE TO LOSS CONTROL W/O COLLISION ON HWY	24	20	4	20	17	3	2	1	1	1	1	0
818	OTHER NON-COLLISION M/V TRAFFIC ACCIDENT	11	9	2	10	8	2	0	0	0	1	1	0
819	M/V TRAFFIC ACCIDENT UNSPECIFIED NATURE	132	83	49	122	77	45	10	6	4	0	0	0
820-825	MOTOR VEHICLE NONTRAFFIC ACCIDENTS	11	6	5	11	6	5	0	0	0	0	0	0
820	NON-TRAFFIC ACCIDENT INVOLVING SNOW VEHICLE	2	2	0	2	2	0	0	0	0	0	0	0
821	NON-TRAFFIC ACCIDENT INVOLVING OTH OFF-ROAD M/V	1	1	0	1	1	0	0	0	0	0	0	0
822	OTH M/V NON-TRAFFIC ACC INVOLV COLLISION MOVING OBJ	5	2	3	5	2	3	0	0	0	0	0	0
825	OTH M/V NON-TRAFFIC ACCIDENT OTH & UNSPECIF	3	1	2	3	1	2	0	0	0	0	0	0
830-838	WATER TRANSPORT ACCIDENTS	8	8	0	8	8	0	0	0	0	0	0	0
830	ACCIDENT TO WATERCRAFT CAUSING SUBMERSION	1	1	0	1	1	0	0	0	0	0	0	0
831	ACCIDENT TO WATERCRAFT CAUSING OTHER INJURY	1	1	0	1	1	0	0	0	0	0	0	0
832	OTH ACCIDENTAL SUBMERS/DROWN IN WATER TRANSP ACCIDENT	2	2	0	2	2	0	0	0	0	0	0	0
838	OTH & UNSPECF WATER TRANSPORT ACCIDENT	4	4	0	4	4	0	0	0	0	0	0	0
840-845	AIR AND SPACE TRANSPORT ACCIDENTS	10	10	0	9	9	0	1	1	0	0	0	0
841	ACCIDENT TO POWERED AIRCRAFT, OTH & UNSPECF	10	10	0	9	9	0	1	1	0	0	0	0
850-858	ACCIDENTAL POISONING BY DRUGS AND MEDICAMENTS	27	11	16	24	10	14	2	0	2	0	0	0
850	ACC POISON BY ANALGESICS, ANTIPYRETICS, ANTIRHEUMATICS	8	3	5	8	3	5	0	0	0	0	0	0
853	ACCIDENTAL POISONING BY TRANQUILIZERS	1	1	0	1	1	0	0	0	0	0	0	0
854	ACCIDENTAL POISONING BY OTH PSYCHOTROPIC AGENTS	1	0	1	0	0	0	1	0	1	0	0	0
855	ACC POISON BY OTH DRUGS ACTING ON CNS & AUTONOM NS	6	2	4	5	2	3	1	0	1	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			BLACK			OTHER		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)												
856	ACCIDENTAL POISONING BY ANTIBIOTICS	1	0	1	1	0	1	0	0	0	0	0	0
858	ACCIDENTAL POISONING BY OTHER DRUGS	10	5	5	9	4	5	0	0	0	0	0	0
860-869	ACCIDENTAL POISONING BY OTHER SUBSTANCES GASES AND VAPOURS	8	6	2	8	6	2	0	0	0	0	0	0
860	ACCIDENTAL POISONING BY ALCOHOL NEC	1	1	0	1	1	0	0	0	0	0	0	0
866	ACC POISONING BY OTH & UNSPECF SOLID/LIQUID SUBS	1	1	0	1	1	0	0	0	0	0	0	0
868	ACC POISONING BY OTH UTILITY GAS & OTH CARBON MONOX	5	3	2	5	3	2	0	0	0	0	0	0
869	ACC POISONING BY OTHER GASES & VAPORS	1	1	0	1	1	0	0	0	0	0	0	0
878-879	SURGICAL & MEDICAL PROCEDURES AS CAUSE OF LATER COMPLICATION	43	18	25	43	18	25	0	0	0	0	0	0
878	SURG OPER CAUSE ABNORM REACT/COMPL W/O MISADVENTURE	39	17	22	39	17	22	0	0	0	0	0	0
879	OTH PROCED W/O MISADVENTURE CAUSING ABNORM REACTION	4	1	3	4	1	3	0	0	0	0	0	0
880-888	ACCIDENTAL FALLS	372	162	210	361	155	206	7	5	2	4	2	2
880	FALL ON OR FROM STAIRS OR STEPS	57	33	24	56	32	24	1	1	0	0	0	0
881	FALL ON OR FROM LADDERS OR SCAFFOLDING	8	7	1	7	6	1	1	1	0	0	0	0
882	FALL FROM OR OUT OF BUILDING OR OTHER STRUCTURE	12	8	4	12	8	4	0	0	0	0	0	0
883	FALL INTO HOLE OR OTHER OPENING IN SURFACE	2	2	0	2	2	0	0	0	0	0	0	0
884	OTHER FALL FROM ONE LEVEL TO ANOTHER	17	14	3	15	12	3	1	1	0	1	1	0
885	FALL ON SAME LEVEL FROM SLIPPING,TRIPPING,STUMBLING	7	4	3	7	4	3	0	0	0	0	0	0
887	FRACTURE, CAUSE UNSPECIFIED	180	50	130	176	48	128	2	1	1	2	1	1
888	OTHER & UNSPECIFIED FALL	89	44	45	86	43	43	2	1	1	1	0	1
890-899	ACCIDENTS CAUSED BY FIRES AND FLAMES	51	26	25	45	23	22	5	2	3	1	1	0
890	CONFLAGRATION IN PRIVATE DWELLING	43	23	20	37	20	17	5	2	3	1	1	0
892	CONFLAGRATION NOT IN BUILDING OR STRUCTURE	1	1	0	1	1	0	0	0	0	0	0	0
893	ACCIDENT CAUSED BY IGNITION OF CLOTHING	2	1	1	2	1	1	0	0	0	0	0	0
894	IGNITION OF HIGHLY INFLAMMABLE MATERIAL	1	1	0	1	1	0	0	0	0	0	0	0
895	ACCIDENT CAUSED BY CONTROLLED FIRE IN PRIV DWELLING	1	0	1	1	0	1	0	0	0	0	0	0
898	ACC CAUSED BY OTHER SPECIFIED FIRE & FLAMES	1	0	1	1	0	1	0	0	0	0	0	0
899	ACCIDENT CAUSED BY UNSPECIFIED FIRE	2	0	2	2	0	2	0	0	0	0	0	0
900-909	ACCIDENTS CAUSED BY NATURAL AND ENVIRONMENTAL FACTORS	13	10	3	13	10	3	0	0	0	0	0	0
900	EXCESSIVE HEAT	1	0	1	1	0	1	0	0	0	0	0	0
901	EXCESSIVE COLD	3	3	0	3	3	0	0	0	0	0	0	0
902	HIGH & LOW AIR PRESSURE & CHANGES IN AIR PRESSURE	3	3	0	3	3	0	0	0	0	0	0	0
904	HUNGER, THIRST, EXPOSURE, & NEGLECT	2	1	1	2	1	1	0	0	0	0	0	0
905	VENOMOUS ANIMALS & PLANTS AS CAUSE OF TOXIC REACTION	1	1	0	1	1	0	0	0	0	0	0	0
906	OTH INJURY CAUSED BY ANIMALS	1	0	1	1	0	1	0	0	0	0	0	0
907	LIGHTNING	1	1	0	1	1	0	0	0	0	0	0	0
908	CATACLYSMIC STORMS, & FLOODS RESULTING FROM STORMS	1	1	0	1	1	0	0	0	0	0	0	0
910-915	ACCIDENTS CAUSED BY SUBMERSION SUFFOCATION & FOREIGN BODIES	168	110	58	157	101	56	9	8	1	2	1	1
910	ACCIDENTAL DROWNING & SUBMERSION	58	48	10	51	41	10	7	7	0	0	0	0
911	INHALATION, INGESTION OF FOOD CAUSING OBST/SUFFOC	21	13	8	21	13	8	0	0	0	0	0	0
912	INHALATION, INGESTION OF OTH OBJECT CAUSE OBST/SUFFOC	68	35	33	65	34	31	1	0	1	2	1	1
913	ACCIDENTAL MECHANICAL SUFFOCATION	19	13	6	18	12	6	1	1	0	0	0	0
915	FOREIGN BODY ACCIDENTALLY ENTERING OTHER ORIFICE	2	1	1	2	1	1	0	0	0	0	0	0
916-928	OTHER ACCIDENTS	113	79	34	106	73	33	5	5	0	2	1	1

TABLE C-15

1998

ICD. LIST NUMBER	CAUSE OF DEATH	T O T A L S			W H I T E			B L A C K			O T H E R		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)												
916	STRUCK ACCIDENTALLY BY FALLING OBJECT	3	3	0	3	3	0	0	0	0	0	0	0
917	STRUCK AGAINST OR ACCIDENTALLY BY OBJECTS OR PERSONS	3	3	0	3	3	0	0	0	0	0	0	0
919	ACCIDENTS CAUSED BY MACHINERY	6	6	0	6	6	0	0	0	0	0	0	0
920	ACCIDENTS CAUSED BY CUTTING/PIERCING INSTRUMENTS	1	1	0	1	1	0	0	0	0	0	0	0
922	ACCIDENT CAUSED BY FIREARM MISSILE	2	2	0	2	2	0	0	0	0	0	0	0
923	ACCIDENT CAUSED BY EXPLOSIVE MATERIAL	5	5	0	4	4	0	1	1	0	0	0	0
925	ACCIDENT CAUSED BY ELECTRIC CURRENT	5	5	0	5	5	0	0	0	0	0	0	0
928	OTH & UNSPECF ENVIRONMENTAL/ACCIDENTAL CAUSES	88	54	34	82	49	33	4	4	0	2	1	1
929-929	LATE EFFECTS OF ACCIDENTAL INJURY	23	12	11	22	12	10	0	0	0	1	0	1
929	LATE EFFECTS OF ACCIDENTAL INJURY	23	12	11	22	12	10	0	0	0	1	0	1
930-949	DRUGS MEDICAMENTS AND BIOLOGICAL SUBSTANCES IN THERAPY	1	1	0	1	1	0	0	0	0	0	0	0
947	ADVERSE EFFECTS OTH & UNSPECF DRUGS & MEDICINAL SUBS	1	1	0	1	1	0	0	0	0	0	0	0
950-959	SUICIDE AND SELF-INFLICTED INJURY	503	391	112	470	365	105	16	13	3	16	12	4
950	SUICIDE & SELF-INFLIC POISONING SOLID/LIQUID SUBS	90	47	43	85	45	40	3	1	2	2	1	1
951	SUICIDE & SELF-INFLIC POISONING GASES-DOMESTIC USE	1	1	0	1	1	0	0	0	0	0	0	0
952	SUICIDE & SELF-INFLIC POISONING OTHER GASES/VAPORS	27	21	6	26	21	5	0	0	0	1	0	1
953	SUICIDE & SELF-INFLIC INJURY HANGING,STRANGUL,SUFFOC	173	143	30	157	130	27	5	4	1	11	9	2
954	SUICIDE & SELF-INFLIC INJURY BY DROWNING	8	4	4	8	4	4	0	0	0	0	0	0
955	SUICIDE & SELF-INFLIC INJURY BY FIREARMS/EXPLOSIVES	153	137	16	146	130	16	6	6	0	1	1	0
956	SUICIDE & SELF-INFLIC INJURY BY CUTTING/PIERCING INST	10	9	1	10	9	1	0	0	0	0	0	0
957	SUICIDE & SELF-INFLIC INJURY BY JUMPING-HIGH PLACE	23	17	6	19	13	6	2	2	0	1	1	0
958	SUICIDE & SELF-INFLIC INJURY BY OTH & UNSPECIF MEANS	18	12	6	18	12	6	0	0	0	0	0	0
960-969	HOMICIDE AND INJURY PURPOSELY INFLICTED BY OTHER PERSONS	123	103	20	84	67	17	38	35	3	1	1	0
960	FIGHT, BRAWL OR RAPE	3	3	0	2	2	0	1	1	0	0	0	0
963	ASSAULT BY HANGING AND STRANGULATION	3	2	1	1	1	0	2	1	1	0	0	0
965	ASSAULT BY FIREARMS AND EXPLOSIVES	63	56	7	35	29	6	27	26	1	1	1	0
966	ASSAULT BY CUTTING AND PIERCING INSTRUMENT	28	21	7	21	15	6	7	6	1	0	0	0
967	CHILD BATTERING & OTHER MALTREATMENT	3	2	1	3	2	1	0	0	0	0	0	0
968	ASSAULT BY OTHER & UNSPECIFIED MEANS	23	19	4	22	18	4	1	1	0	0	0	0
980-989	INJURY UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	459	334	125	438	320	118	19	13	6	2	1	1
980	POISONING BY SOLID/LIQ SUBS, UNDETERMINED INTENT	414	307	107	396	294	102	17	12	5	1	1	0
982	POISONING BY OTHER GASES, UNDETERMINED INTENT	4	3	1	4	3	1	0	0	0	0	0	0
983	HANGING, STRANGUL, SUFFOCATION, UNDETERMINED INTENT	1	1	0	1	1	0	0	0	0	0	0	0
984	DROWNING, UNDETERMINED INTENT	21	11	10	20	11	9	1	0	1	0	0	0
985	INJURY BY FIREARMS/EXPLOSIVES, UNDETERMINED INTENT	1	1	0	1	1	0	0	0	0	0	0	0
987	FALLING FROM HIGH PLACE, UNDETERMINED INTENT	2	1	1	2	1	1	0	0	0	0	0	0
988	INJURY BY OTH & UNSPECF MEANS, UNDETERMINED INTENT	15	9	6	14	9	5	0	0	0	1	0	1
989	LATE EFFECTS OF INJURY, UNDETERMINED INTENT	1	1	0	0	0	0	1	1	0	0	0	0
***	RESIDENT GRAND TOTALS	55204	25635	29569	52752	24371	28381	1969	1016	953	472	239	233

TOTALS INCLUDE 11 OF UNKNOWN RACE: 9 MALES AND 2 FEMALES.

ICD. LIST NUMBER	CAUSE OF DEATH		TOTALS			WHITE			BLACK			OTHER		
			TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
001 139	I. INFECTIVE AND PARASITIC DISEASES	2.3%	1258	664	594	1146	605	541	102	55	47	10	4	6
140 239	II. NEOPLASMS	25.4%	14007	6990	7017	13369	6654	6715	508	271	237	130	65	65
240 279	III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES	3.6%	2000	899	1101	1872	833	1039	112	57	55	16	9	7
280 289	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	0.5%	251	94	157	234	87	147	15	7	8	2	0	2
290 319	V. MENTAL DISORDERS	2.9%	1596	528	1068	1539	504	1035	49	22	27	7	1	6
320 389	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	2.9%	1581	641	940	1538	621	917	33	13	20	10	7	3
390 459	VII. DISEASES OF THE CIRCULATORY SYSTEM	37.7%	20818	9218	11600	20017	8829	11188	649	307	342	151	81	70
460 519	VIII. DISEASES OF THE RESPIRATORY SYSTEM	11.8%	6514	2843	3671	6312	2742	3570	147	77	70	55	24	31
520 579	IX. DISEASES OF THE DIGESTIVE SYSTEM	3.7%	2066	1015	1051	1974	964	1010	69	42	27	23	9	14
580 629	X. DISEASES OF THE GENITOURINARY SYSTEM	2.6%	1436	619	817	1349	587	762	69	25	44	18	7	11
630 676	XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND PUERPERIUM	0.0%	2	0	2	2	0	2	0	0	0	0	0	0
680 709	XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	0.1%	69	26	43	64	25	39	5	1	4	0	0	0
710 739	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	0.3%	184	39	145	173	36	137	10	2	8	1	1	0
740 759	XIV. CONGENITAL ANOMALIES	0.4%	203	103	100	190	94	96	9	7	2	4	2	2
760 779	XV. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD	0.4%	236	126	110	190	103	87	40	19	21	6	4	2
780 799	XVI. SYMPTOMS SIGNS, AND ILL-DEFINED CONDITIONS	1.0%	570	226	344	536	207	329	22	12	10	6	3	3
800 999	XVII. EXTERNAL CAUSES OF INJURY AND POISONING	4.4%	2413	1604	809	2247	1480	767	130	99	31	33	22	11
***	RESIDENT GRAND TOTALS	100.0%	55204	25635	29569	52752	24371	28381	1969	1016	953	472	239	233

INFANT & NEONATAL DEATHS

SECTION D

INFANT AND NEONATAL DEATHS

The total number of resident infant deaths (deaths of children less than 1 year of age) decreased by 2.6% in Massachusetts from 425 in 1997 to 414 in 1998. The rate of infant deaths also decreased -- from 5.3 infant deaths per 1,000 live births in 1997 to 5.1 infant deaths per 1,000 live births in 1998. As with live births and other deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths of infants under 28 days of age) decreased from 323 in 1997 to 315 in 1998, a decrease of 2.5%. The rate of neonatal deaths also decreased, from 4.0 in 1997 to 3.9 in 1998.

INFANT DEATHS BY RACE

Beginning with the publication of 1989 data, several changes occurred in the method of calculating infant mortality rates (IMRs) by race and ethnicity. These changes affect only the calculation of race/ethnic infant mortality rates; all other data presented in this publication are comparable to information from previous years. These changes are the result of new federal recommendations for analyzing birth information, including infant mortality data, and the implementation of the new Massachusetts Standard Certificate of Death in 1989.

Infants born to black non-Hispanic mothers continue to have the highest infant mortality rates (IMRs). The IMR for black non-Hispanics in 1998 was 10.6 per 1,000 live births. This represents a decrease of 1.1 (9.4%) from the 1997 rate, but it is over double the IMR for white non-Hispanic infants.

In 1998, the IMR for Hispanics was unchanged at 6.7 per 1,000 live births. The mortality experience of infants born to Hispanic mothers is midway between the experience of infants born to white non-Hispanic mothers than to black non-Hispanic mothers. The 1998 IMR of 6.7 for Hispanic infants is 31.3% higher than the white non-Hispanic rate and 36.8% below the black non-Hispanic rate.

Asian mothers had the lowest rates of infant mortality compared to the other race/ethnicity groups. This is consistent with prior years with the exception of 1995. In 1998, the Asian IMR was 2.7 deaths per 1,000 live births. However, caution should be used when interpreting this rate since it is based on a small number (10) of deaths.

INFANT DEATHS BY CAUSE

“Certain conditions originating in the perinatal period” (medical conditions arising from approximately 28 weeks gestation to 28 days of age) was the leading cause of death for white, black, Asian and Hispanic infants. Congenital anomalies represented the second leading cause of death among white, Asian, and Hispanic infants, whereas “All Other Causes” was the second and “Symptoms, signs and ill-defined conditions” (primarily sudden infant death syndrome (SIDS)) was the third leading cause of death for black infants.

The overall leading causes of infant death were conditions arising in the perinatal period (234 deaths) and congenital anomalies (78 deaths), 0% and 9.3% decreases, respectively, from 1997. Other causes of infant death were: SIDS (22 deaths), "Disorders relating to short gestation and unspecified low birthweight" (53 deaths), "Other respiratory conditions of newborn (29 deaths), and homicide (2 deaths). There were 8 fewer deaths from SIDS in 1998 than there were in 1997, representing a 26.7% decrease. The number of homicide deaths (2) has remained relatively constant since 1994

SIDS remains the leading cause of death in the post-neonatal period (28-364 days), while "disorders relating to short gestation and low birthweight" was the leading cause in the neonatal period.

NEONATAL AND POST NEONATAL MORTALITY RATES

The neonatal mortality rate (infants less than 28 days old) was 3.9 deaths per 1,000 live births in 1998. Among white non-Hispanic mothers, the neonatal mortality rate decreased slightly (5%), from 3.7 in 1997 to 3.5 in 1998. During this same time period, the rate increased by 6% among black non-Hispanic mothers (from 8.0 in 1997 to 8.5 in 1998) and decreased by 4% among Hispanic mothers (from 5.2 in 1997 to 5.0 in 1998). Among Asians, the number of neonatal deaths remained constant with 7 in 1997 and 1998. (These rates should be interpreted cautiously since they are based on very few deaths.)

The overall post neonatal mortality rate, representing the number of deaths of infants between 28 and 364 days of age per 1,000 live births, was slightly less in 1998 than in 1997, declining from 1.3 to 1.2 The post neonatal mortality rate among infants of white non-Hispanic mothers was the same in 1998 as in 1997 at 1.1 deaths per 1,000 live births. The most marked change was among infants of black non-Hispanic mothers, where the post neonatal mortality rate decreased between 1997 and 1998, from 3.7 in 1997 to 2.2 deaths per 1,000 births in 1998; a 41% decrease.

There was a small increase in the rate of post neonatal deaths among Hispanics, from 1.5 to 1.7, corresponding to a rate increase of 13.3%. The number of post neonatal deaths among Asians did not change from 1997 to 1998 (3 deaths).

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

INFANT DEATH

Death of a child whose age is less than one year (365 days).

NEONATAL DEATH

Death of a child whose age is less than 28 days.

POST NEONATAL DEATH

Death of a child whose age is at least 28 days, but less than one year.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

INFANT MORTALITY RATE (IMR)	$\frac{\text{\# of Resident Deaths at Less than 1 Year of Age}}{\text{Total Resident Live Births}} \times 1,000$
NEONATAL MORTALITY RATE (NMR)	$\frac{\text{\# of Resident Deaths at Less than 28 Days of Age}}{\text{Total Resident Live Births}} \times 1,000$
POST NEONATAL MORTALITY RATE (PNMR)	$\frac{\text{\# of Resident Deaths at Least 28 Days Old but <365 Days Old}}{\text{Total Resident Live Births}} \times 1,000$

Figure D-1. Infant Mortality by Race, Massachusetts 1980 - 1998

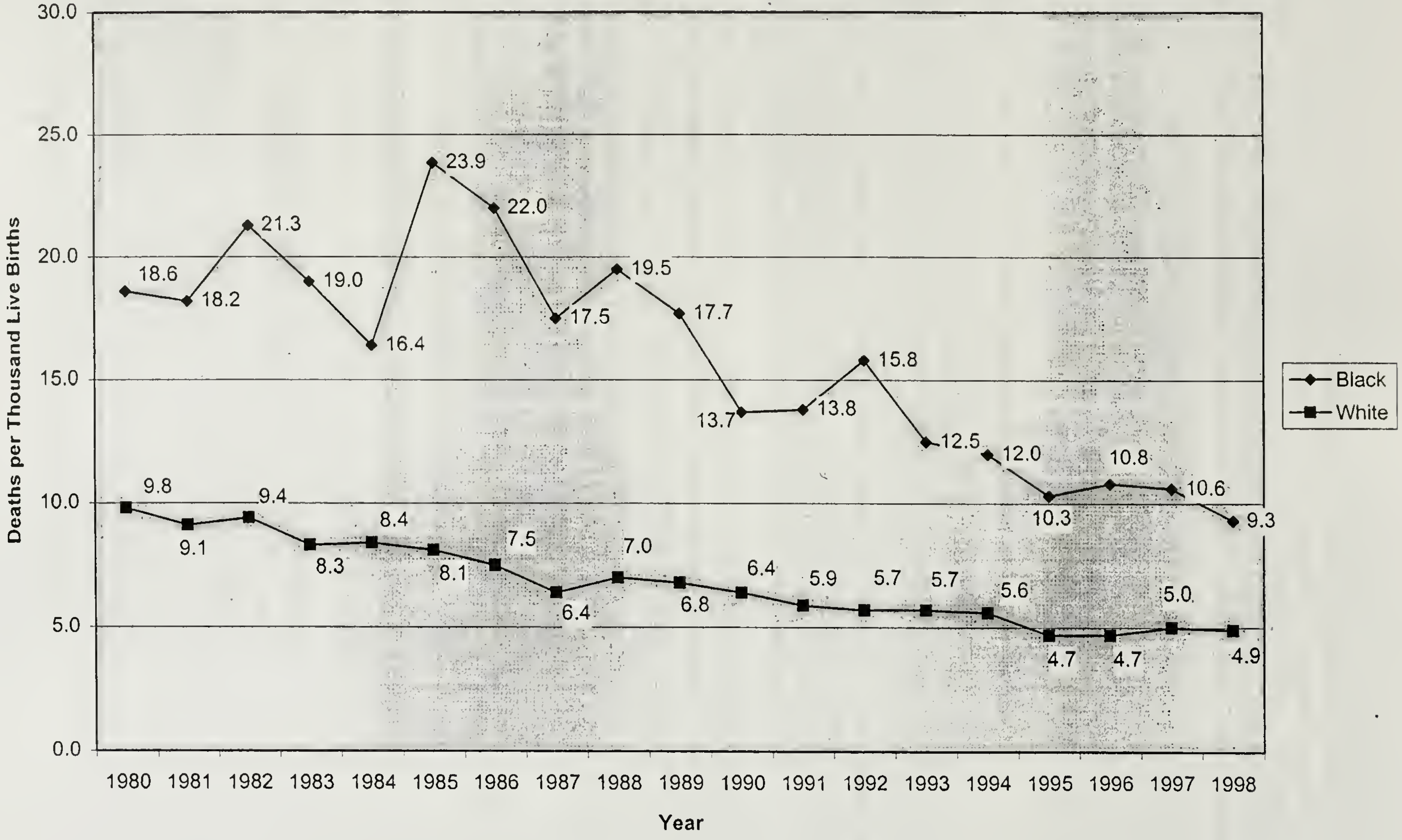

Figure D-2. Neonatal Mortality by Race, Massachusetts: 1980 - 1998

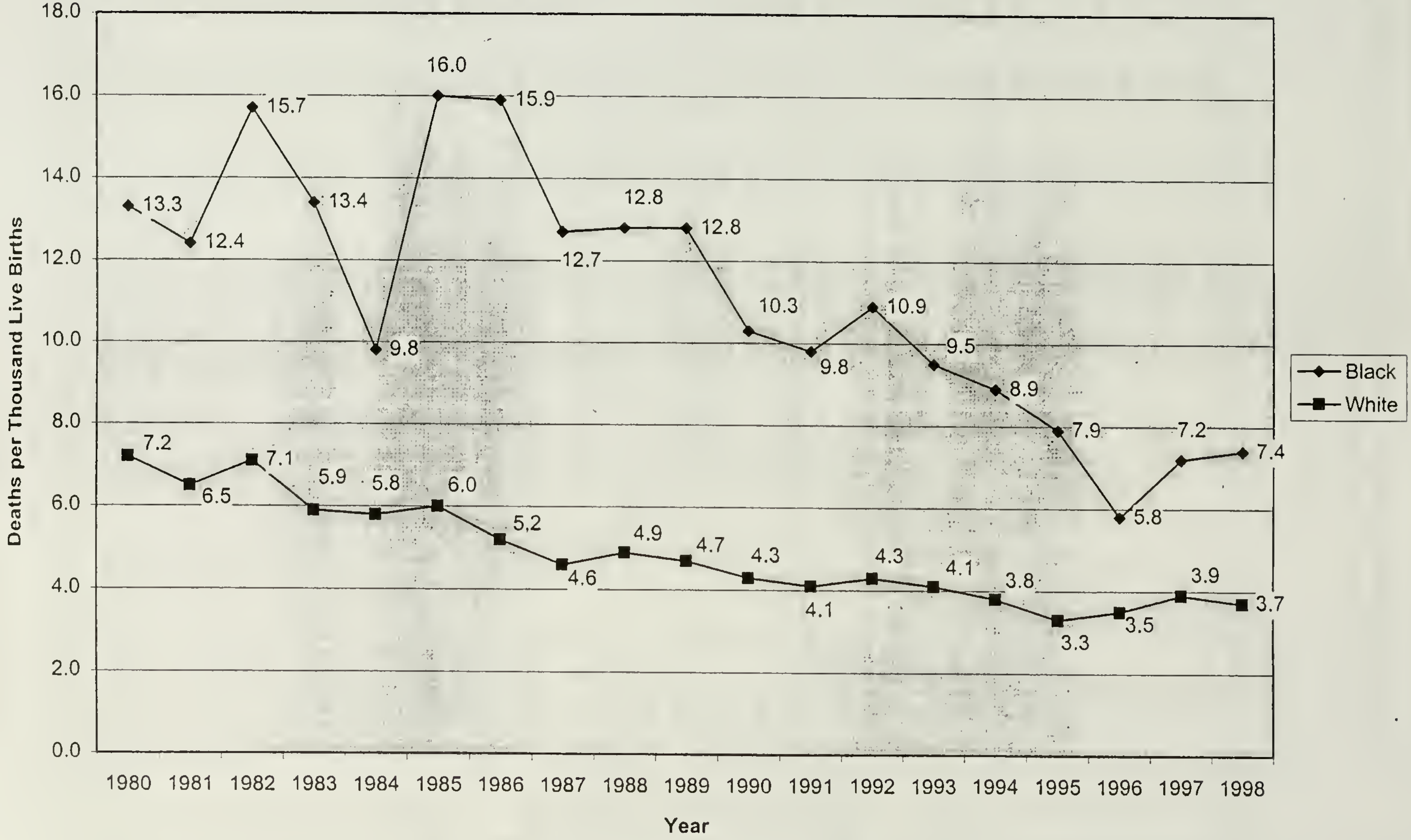

Table D-1. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race and Hispanic Ethnicity, Massachusetts: 1989-1998

INFANT MORTALITY

	State Total[1,2]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1989	697	7.6	482	6.6	126	18.8	67	8.6	15	4.6	7	8.1
1990	649	7.0	442	6.1	98	13.7	77	9.1	24	7.0	8	9.5
1991	577	6.5	381	5.5	101	15.0	80	9.4	14	4.2	1	--[5]
1992	569	6.5	371	5.5	110	16.4	67	7.9	16	4.9	5	5.1
1993	523	6.2	346	5.3	84	13.1	77	9.3	13	3.9	3	--[5]
1994	499	6.0	343	5.3	79	12.6	64	7.6	8	2.4	5	5.3
1995	419	5.1	275	4.4	65	11.1	58	7.2	19	5.5	2	--[5]
1996	403	5.0	289	4.7	63	11.4	40	5.1	8	2.2	2	--[5]
1997	425	5.3	294	4.8	64	11.7	55	6.7	10	2.6	2	--[5]
1998	414	5.1	287	4.6	59	10.6	58	6.7	10	2.7	0	0.0

NEONATAL MORTALITY

	State Total[1,2]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1989	479	5.2	327	4.5	93	13.9	49	6.3	6	1.8	4	--[5]
1990	446	4.8	298	4.1	75	10.5	49	5.8	19	5.5	5	5.5
1991	401	4.5	266	3.9	72	10.7	53	6.2	10	3.0	0	0.0
1992	415	4.8	274	4.0	76	11.4	51	6.0	10	3.0	4	--[5]
1993	375	4.4	245	3.7	64	10.0	55	6.7	9	2.7	2	--[5]
1994	349	4.2	240	3.7	58	9.3	40	4.7	7	2.1	4	--[5]
1995	298	3.6	198	3.1	50	8.5	39	4.8	10	2.9	1	--[5]
1996	290	3.6	222	3.6	34	6.2	27	3.5	5	1.4	1	--[5]
1997	323	4.0	228	3.7	44	8.0	43	5.2	7	1.8	1	--[5]
1998	315	3.9	218	3.5	47	8.5	43	5.0	7	1.9	0	0.0

POST NEONATAL MORTALITY

	State Total[1,2]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1989	218	2.4	155	2.1	33	4.9	18	2.3	9	2.8	3	--[5]
1990	203	2.2	144	2.0	23	3.2	28	3.3	5	1.5	3	--[5]
1991	176	2.0	115	1.7	29	4.3	27	3.2	4	--[5]	1	--[5]
1992	154	1.8	97	1.4	34	5.1	16	1.9	6	1.8	1	--[5]
1993	148	1.7	101	1.5	20	3.1	22	2.7	4	--[5]	1	--[5]
1994	150	1.8	103	1.6	21	3.3	24	2.8	1	--[5]	1	--[5]
1995	121	1.5	77	1.2	15	2.6	19	2.3	9	2.6	1	--[5]
1996	113	1.4	67	1.1	29	5.3	13	1.7	3	--[5]	1	--[5]
1997	102	1.3	66	1.1	20	3.7	12	1.5	3	--[5]	1	--[5]
1998	99	1.2	69	1.1	12	2.2	15	1.7	3	--[5]	0	0.0

1. Deaths of infants of unknown race are included in the total calculation. For rate computations, births of infants of unknown race are allocated into the race categories according to the distribution of births of known race. 2. After the official year-end closing of the 1998 death certificate registration process, four additional infant deaths were identified for whom death certificates had not been filed. All of these infants were born to mothers who were residents of Boston at the time of their births. 3. Other: American Indian and Other races. 4. Rates are expressed per 1,000 live births. 5 Calculations based on fewer than five events are excluded.

Table D-2. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race[1], Massachusetts: 1980-1998

INFANT MORTALITY

	State Total[2]		White		Black		Asian/Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1980	748	10.3	655	9.8	87	18.6	5	4.6
1981	710	9.6	616	9.1	85	18.2	8	6.1
1982	764	10.1	656	9.4	102	21.3	5	3.3
1983	682	9.0	579	8.3	89	19.0	12	7.4
1984	699	8.9	601	8.4	82	16.4	13	7.5
1985	745	9.1	608	8.1	126	23.8	11	6.1
1986	695	8.4	560	7.5	123	22.0	11	4.6
1987	608	7.2	486	6.4	110	17.5	12	4.5
1988	693	7.9	546	7.0	133	19.5	13	3.8
1989	697	7.6	549	6.8	131	17.7	17	4.8
1990	649	7.0	519	6.4	106	13.7	24	6.5
1991	577	6.5	461	6.0	102	13.8	14	3.9
1992	569	6.5	438	5.7	114	15.8	17	4.7
1993	523	6.2	423	5.7	87	12.5	13	3.5
1994	499	6.0	407	5.6	81	12.0	11	2.9
1995	419	5.1	333	4.7	65	10.3	21	5.5
1996	403	5.0	329	4.7	65	10.8	8	2.0
1997	425	5.3	349	5.0	66	10.6	10	2.4
1998	414	5.1	345	4.9	59	9.3	10	2.3

NEONATAL MORTALITY

	State Total[2]		White		Black		Asian/Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1980	550	7.6	483	7.2	62	13.3	5	4.6
1981	510	6.9	442	6.5	59	12.4	5	3.8
1982	573	7.6	494	7.1	75	15.7	3	--[5]
1983	482	6.3	411	5.9	63	13.4	7	4.3
1984	472	6.0	411	5.8	49	9.8	8	4.6
1985	538	6.6	447	6.0	85	16.0	5	2.8
1986	478	5.8	383	5.2	89	15.9	5	2.1
1987	432	5.1	343	4.6	80	12.7	9	3.4
1988	477	5.4	383	4.9	87	12.8	6	1.8
1989	479	5.2	376	4.7	95	12.8	8	2.3
1990	446	4.8	347	4.3	80	10.3	9	5.1
1991	401	4.5	319	4.1	72	9.8	10	2.8
1992	415	4.8	325	4.3	79	10.9	11	3.1
1993	375	4.4	300	4.1	66	9.5	9	2.4
1994	349	4.2	280	3.8	60	8.9	9	2.4
1995	298	3.6	237	3.3	50	7.9	11	2.9
1996	290	3.6	249	3.5	35	5.8	5	1.2
1997	323	4.0	271	3.9	45	7.2	7	1.7
1998	315	3.9	261	3.7	47	7.4	7	1.6

Table D-2 (cont'd). Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race[1], Massachusetts: 1980-1998

POST NEONATAL MORTALITY

	State Total[2]		White		Black		Asian/Other[3]	
Year	#	Rate[4]	#	Rate[4]	#	Rate[4]	#	Rate[4]
1980	198	2.7	172	2.6	25	5.3	0	0.0
1981	200	2.7	174	2.6	26	5.8	3	--[5]
1982	191	2.5	162	2.3	27	5.6	2	--[5]
1983	200	2.7	168	2.4	26	5.6	5	3.1
1984	227	2.9	190	2.6	33	6.6	5	2.9
1985	207	2.5	161	2.1	41	7.8	6	3.3
1986	217	2.6	177	2.3	34	6.1	6	2.5
1987	176	2.1	143	1.8	30	4.8	3	--[5]
1988	216	2.5	163	2.1	46	6.7	7	2.0
1989	218	2.4	173	2.1	36	4.9	9	2.5
1990	203	2.2	172	2.1	26	3.4	5	1.4
1991	176	2.0	142	1.8	30	4.1	4	--[5]
1992	154	1.8	113	1.5	35	4.8	6	1.7
1993	148	1.7	123	1.7	21	3.0	4	--[5]
1994	150	1.8	127	1.7	21	3.1	2	--[5]
1995	121	1.5	96	1.3	15	2.4	10	2.6
1996	113	1.4	80	1.1	30	5.0	3	--[5]
1997	102	1.3	78	1.1	21	3.4	3	--[5]
1998	99	1.2	84	1.2	12	1.9	3	--[5]

1. Hispanic origin could not be identified from the Massachusetts death certificate before 1989; thus, Hispanic trend data are not available. Most Hispanics are included in the race category of white. Hispanic infant mortality data for the years 1989 through 1998 are presented in Table 8B. 2. Deaths of infants of unknown race are included in the total calculation. For rate computations, infants of unknown race are allocated into the race categories according to the distribution of births of known race. 3. Other: American Indian and Other races. 4. Rates are expressed per 1,000 live births. 5. Calculations based on fewer than five events are excluded.

Table D-3. Infant, Neonatal, and Post Neonatal Deaths by Cause, Massachusetts: 1998

Cause of Death[1]	ICD-9 Code	Infant (<1 year) #	Infant (<1 year) %[2]	Neonatal (<28 days) #	Neonatal (<28 days) %	Post Neonatal (28-364 days) #	Post Neonatal (28-364 days) %
TOTAL[3]		414	100%	315	100%	99	100%
Infectious and parasitic diseases	001-139	5	1.2	2	--	3	--
Cancer	140-208	3	--	1	--	2	--
Diseases of the blood and blood forming organs (anemia)	280-289	1	--	0	0.0	1	--
Other diseases of nervous system and sense organs	323-389	6	1.4	2	--	4	--
Diseases of the respiratory system	460-519	11	2.7	0	0.0	11	11.1
Diseases of digestive system	520-579	4	--	1	--	3	--
Congenital anomalies	740-759	78	18.8	61	19.4	17	17.2
Anencephalus and similar anomalies	740	3	--	3	--	0	--
Spina Bifida	741	1	--	1	--	0	--
Congenital anomalies of central nervous system and eye	742-743	8	--	7	--	1	--
Congenital anomalies of heart	745-746	16	--	8	--	8	--
Other congenital anomalies of circulatory system	747	5	--	5	--	0	--
Congenital anomalies of respiratory system	748	18	--	17	--	1	--
Cleft palate and other digestive tract anomalies	749-751	1	--	0	--	1	--
Congenital anomalies of genitourinary system	752-753	6	--	6	--	0	--
Congenital anomalies of musculoskeletal system	754-756	5	--	4	--	1	--
Chromosomal anomalies	758	10	--	5	--	5	--
Certain conditions originating in the perinatal period	760-779	234	56.5	227	72.1	7	7.1
Newborn affected by maternal conditions which may be unrelated to present Pregnancy	760	6	--	6	--	0	--
Newborn affected by maternal complications of pregnancy	761	35	--	35	--	0	--
Newborn affected by complications of placenta, cord and membrane	762	28	--	28	--	0	--
Newborn affected by other complications of labor and delivery	763	4	--	4	--	0	--
Disorders relating to short gestation and unspecified low birthweight	765	53	--	53	--	0	--
Birth trauma	767	3	--	3	--	0	--
Intrauterine hypoxia and birth asphyxia	768	10	--	10	--	0	--
Respiratory distress syndrome	769	16	--	16	--	0	--
Other respiratory conditions of newborn	770	29	--	25	--	4	--
Infections specific to the perinatal period	771	16	--	15	--	1	--
Neonatal hemorrhage	772	8	--	8	--	0	--
Other and ill-defined conditions originating in the perinatal period	775-779	26	--	24	--	2	--
Symptoms, signs, and ill-defined conditions	780-799	28	6.8	1	--	27	27.3
Sudden Infant Death Syndrome (SIDS)	798.0	22	--	0	--	22	--
Accidents and adverse effects	E800-E949	13	3.1	3	--	10	10.1
Homicide	E960-E969	2	--	1	--	1	--
All other causes	Residual	29	7.0	16	5.1	13	13.1

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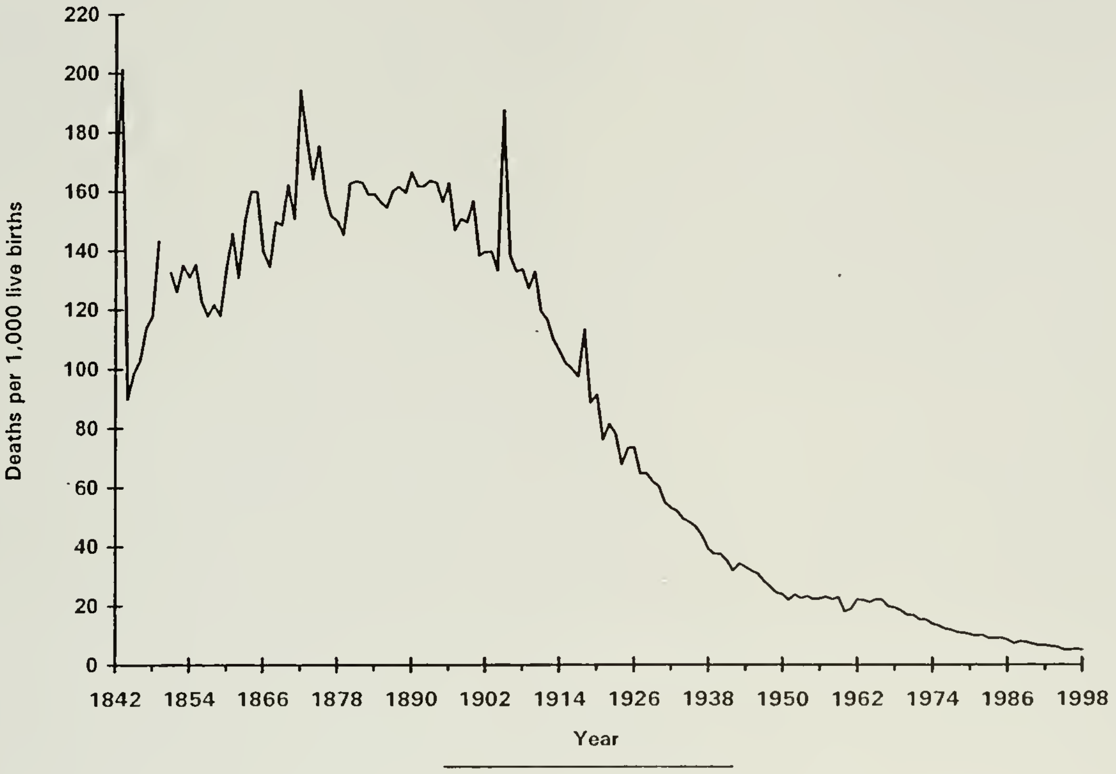
1. Please refer to page 116 for an explanation of ICD-9 codes. 2. Percents not calculated for subcategories. 3 Calculations based on fewer than five events are excluded

Table D-4. Infant Deaths by Major Causes, Race and Hispanic Ethnicity, Massachusetts: 1998

		White, Non-Hispanic		Black, Non-Hispanic		Asian, Non-Hispanic		Hispanic	
Cause of Death	ICD-9 Code	#	%	#	%	#	%	#	%
TOTAL		287	100%	59	100%	10	100%	58	100%
Congenital anomalies	740-759	63	22.0	5	8.5	2	--[1]	8	13.8
Certain conditions originating in the perinatal period	760-779	150	52.3	40	67.8	6	60	38	65.5
Symptoms, signs, and ill-defined conditions	780-799	20	7.0	6	10.2	0	0.0	2	--[1]
Accidents and adverse effects	E800-E949	10	3.5	1	--[1]	0	0.0	2	--[1]
Homicide	E960-E969	2	--[1]	0	0.0	0	0.0	0	0.0
All other causes	Residual	42	14.6	7	11.9	2	--[1]	8	13.8

[1] Calculations based on fewer than five events are excluded.

Figure D-3. Infant Mortality Rates, Massachusetts: 1842-1998



MARRIAGES & DIVORCES

SECTION E

MARRIAGES AND DIVORCES

Marriages and divorces are reported by place of occurrence in Massachusetts. For example, if two Boston residents are married in Barnstable, this marriage will be reported by place of occurrence (Barnstable) rather than the residence of the couple (Boston). Marriages have traditionally been reported in this manner because of the number of couples who live in different communities. Additionally, out-of-state residents who marry in Massachusetts are included in these data.

Marriages and divorces which involve Massachusetts residents, but occur in other states, are not included in these figures. No system of interstate exchange exists for these events. Unlike some states, Massachusetts marriage and divorce laws neither encourage out-of-state residents to come to the state nor discourage residents from using the Massachusetts system by imposing long waiting periods, etc. This allows the marriage data to be used to estimate resident marriages.

In 1998, 38,722 marriages occurred in Massachusetts compared to 41,528 in 1997, a decrease of 6.8%. The rate of marriages was at 6.7 per 1,000 population in 1997, the rate was in 6.2 1998. The 1998 US rate of marriages per 1,000 population was 8.3, slightly lower than the 1997 US rate of 8.9. Of all brides in Massachusetts in 1998, 72.4% had never previously been married. This percentage was slightly higher among the grooms--72.8%.

In 1998, 16,010 divorces were granted in Massachusetts, an increase of 0.4% from the 15,942 divorces granted in 1997. The 1998 rate of divorce per 1,000 population in Massachusetts was 2.5, slightly lower than the 1997 divorce rate of 2.6. This rate was well below the 1998 US rate of 4.2 divorces per 1,000 population.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

MARRIAGE RATE $$\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1{,}000$$

DIVORCE RATE $$\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1{,}000$$

Table E-1. Marriages and Divorces by County

Massachusetts Occurrence: 1998

	Marriages	Divorces
State Total	38,723	16,010
Counties		
Barnstable	2,393	677
Bershire	965	412
Bristol	3,033	1,711
Dukes	454	55
Essex	4,470	2,180
Franklin	411	287
Hampden	2,813	1,151
Hampshire	841	274
Middlesex	8,172	3,044
Nantucket	358	28
Norfolk	3,513	1,535
Plymouth	2,786	1,271
Suffolk	4,094	1,105
Worcester	4,420	2,280

Figure E-1. Rates of Marriage and Divorce per 1,000 Population, Massachusetts: 1900-1998

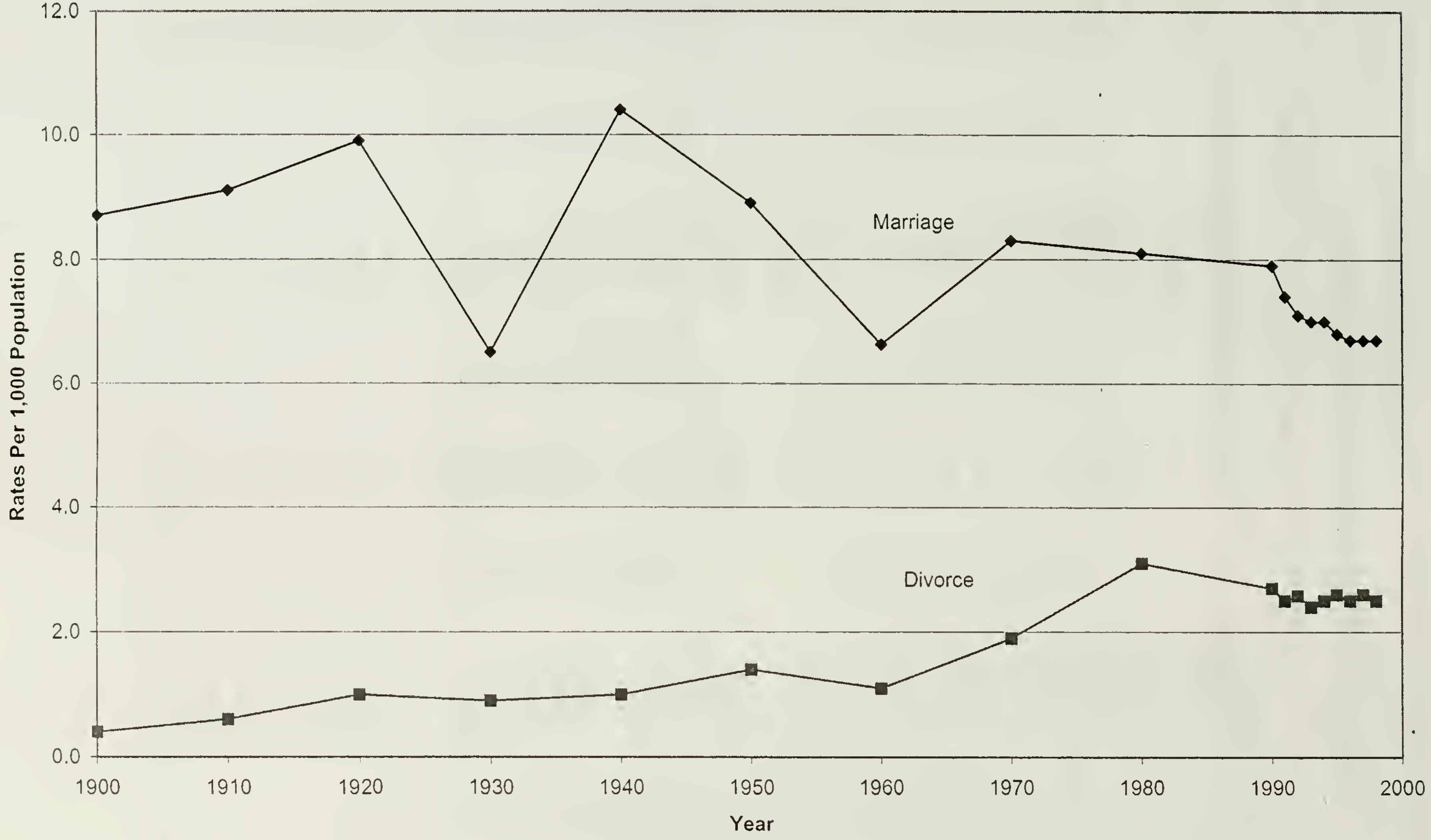


Table E-2. Marriages and Divorces and Rates per 1,000 Population

Massachusetts Occurrence, Selected Years: 1900-1998

	Marriages		Divorces	
Year	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9
1988	49,941	8.5	17,676	3.0
1989	49,174	8.4	16,819	2.9
1990	47,786	7.9	16,258	2.7
1991	44,621	7.4	14,987	2.5
1992	43,228	7.1	15,411	2.5
1993	42,355	7.0	14,435	2.4
1994	42,503	7.0	15,450	2.5
1995	41,522	6.8	15,772	2.6
1996	41,234	6.7	15,485	2.5
1997	41,528	6.7	15,942	2.6
1998	38,722	6.2	16,010	2.6

Table E-3. Marriages by Age and Marital Status

Massachusetts Occurrence: 1998

Bride

	Total		Single		Widowed		Divorced	
Age	Number	%	Number	%	Number	%	Number	%
Total	38,722	100.0%	28,790	74.4%	821	2.1%	9,111	23.5%
<20	1,034	100.0%	1,032	99.8%	0	0.0%	2	0.2%
20-29	19,911	100.0%	18,790	94.4%	29	0.2%	1,092	5.5%
30-39	11,959	100.0%	7,715	64.5%	141	1.2%	4,103	34.3%
40-49	4,035	100.0%	1,064	26.4%	199	4.9%	2,772	68.7%
50-59	1,312	100.0%	160	12.2%	177	13.5%	975	74.3%
60-69	346	100.0%	21	6.1%	179	51.7%	146	42.2%
70+	125	100.0%	8	6.4%	96	76.8%	21	16.8%

Groom

	Total		Single		Widowed		Divorced	
Age	Number	%	Number	%	Number	%	Number	%
Total	38,723	100.0%	28,207	72.8%	865	2.2%	9,651	24.9%
<20	386	100.0%	386	100.0%	0	0.0%	0	0.0%
20-29	16,374	100.0%	15,719	96.0%	4	0.0%	651	4.0%
30-39	14,109	100.0%	10,305	73.0%	63	0.5%	3,741	26.5%
40-49	4,849	100.0%	1,556	32.1%	118	2.4%	3,175	65.5%
50-59	2,032	100.0%	198	9.7%	215	10.6%	1,619	79.7%
60-69	665	100.0%	29	4.4%	240	36.1%	396	59.6%
70+	308	100.0%	14	4.6%	225	73.1%	69	22.4%

Table E-4. Number of Marriages by age of Bride and Age of Groom

Massachusetts Occurrence: 1998

		Age of Groom						
Age of Bride	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	38,722	386	16,373	14,109	4,849	2,032	665	308
<20	1,034	236	715	71	9	3	0	0
20-29	19,911	143	13,629	5,674	411	49	3	2
30-39	11,959	6	1,918	7,390	2,270	342	25	8
40-49	4,035	1	109	917	1,886	948	158	16
50-59	1,312	0	2	54	265	634	301	56
60-69	346	0	0	3	8	54	165	116
70+	125	0	0	0	0	2	13	110

Table E-5. Number of Marriages for Bride by Number of Marriages for Groom

Massachusetts Occurrence: 1998

	Number of Marriages					
				Groom		
Bride	Total	1	2	3	4	5+
Total	38,723	28,205	8,782	1,513	193	30
1	28,791	24,346	3,959	438	42	6
2	8,290	3,425	3,994	756	102	13
3	1,418	392	720	270	26	10
4	179	34	81	43	21	0
5+	45	8	28	6	2	1

POPULATION

SECTION F

POPULATION

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality and county. They are based primarily on the US Federal Census for 1990.

The Massachusetts population estimates for the years 1985-1989 (Table F-4) are calculated as linear interpolations from 1980 and 1990 US Federal Census data. The 1997 population estimate is an extrapolation of the 1990 US Federal Census and MISER estimates for 1995.

All additional interpolations and calculations have been provided by Bruce B. Cohen and Alison Donta, Division of Research and Epidemiology, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health.

In 1998, there were an estimated 6,291,263 residents of Massachusetts. This represents a 6.0% increase in population since 1987, when the population numbered 5,932,611. Among the total 1998 population in Massachusetts, 48.3% were male, 25.8% were below the age of 20, and 6.7% were over 75 years of age.

Figure F-1. Massachusetts Population: 1900-1998

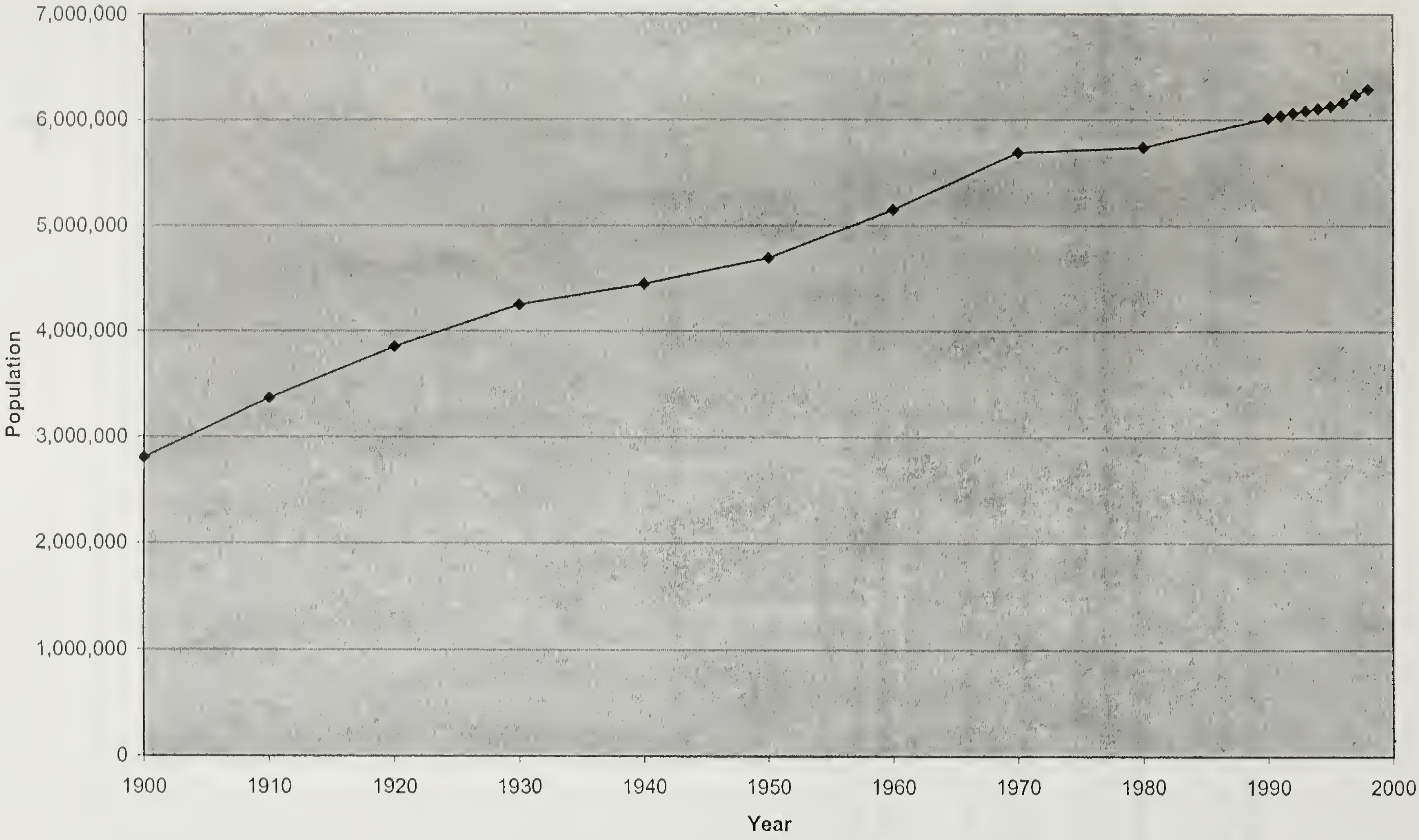


Table F-1. Population by Race, Age, and Sex; Massachusetts:1990[1]

Age	Sex	Total	White	Black	Other[2]
Under 1	Male	46,018	40,463	3,925	1,630
	Female	44,125	38,546	3,926	1,653
	Total	90,143	79,009	7,851	3,283
1-4	Male	169,427	149,849	13,663	5,915
	Female	161,779	142,349	13,489	5,941
	Total	331,206	292,198	27,152	11,856
5-9	Male	193,482	172,170	14,393	6,919
	Female	183,137	162,336	14,104	6,697
	Total	376,619	334,506	28,497	13,616
10-14	Male	177,899	159,257	13,226	5,416
	Female	169,117	150,743	12,916	5,458
	Total	347,016	310,000	26,142	10,874
15-19	Male	209,289	187,227	14,627	7,435
	Female	206,741	184,529	14,595	7,617
	Total	416,030	371,756	29,222	15,052
20-24	Male	256,657	231,290	16,344	9,023
	Female	260,537	234,182	17,002	9,353
	Total	517,194	465,472	33,346	18,376
25-29	Male	277,295	251,142	16,785	9,368
	Female	279,025	252,738	17,311	8,976
	Total	556,320	503,880	34,096	18,344
30-34	Male	268,701	244,766	15,346	8,589
	Female	273,629	249,299	15,867	8,463
	Total	542,330	494,065	31,213	17,052
35-39	Male	237,202	217,981	12,403	6,818
	Female	243,972	223,847	13,153	6,972
	Total	481,174	441,828	25,556	13,790
40-44	Male	211,399	196,542	9,811	5,046
	Female	221,975	206,029	10,619	5,327
	Total	433,374	402,571	20,430	10,373

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[1] Figures are from the 1990 U.S. Census.

[2] Other races include Asian, American Indian, Hawaiian, and others not specified.

Table F-1. (Continued) Population by Race, Age, and Sex; Massachusetts:1990

Age	Sex	Total	White	Black	Other
45-49	Male	162,636	152,146	7,024	3,466
	Female	170,698	159,100	8,211	3,387
	Total	333,334	311,246	15,235	6,853
50-54	Male	126,581	118,555	5,246	2,780
	Female	136,020	127,187	6,274	2,559
	Total	262,601	245,742	11,520	5,339
55-59	Male	120,175	113,887	4,238	2,050
	Female	131,999	124,575	5,263	2,161
	Total	252,174	238,462	9,501	4,211
60-64	Male	121,609	116,299	3,762	1,548
	Female	140,296	133,558	4,844	1,894
	Total	261,905	249,857	8,606	3,442
65-69	Male	110,424	106,135	3,064	1,225
	Female	140,959	135,442	4,083	1,434
	Total	251,383	241,577	7,147	2,659
70-74	Male	85,541	82,863	1,965	713
	Female	121,790	117,883	2,973	934
	Total	207,331	200,746	4,938	1,647
75-79	Male	59,037	57,350	1,199	488
	Female	100,616	97,776	2,156	684
	Total	159,653	155,126	3,355	1,172
80-84	Male	33,468	32,561	669	238
	Female	72,831	71,105	1,338	388
	Total	106,299	103,666	2,007	626
85+	Male	21,905	21,324	439	142
	Female	68,434	66,965	1,187	282
	Total	90,339	88,289	1,626	424
Total	Male	2,888,745	2,651,807	158,129	78,809
	Female	3,127,680	2,878,189	169,311	80,180
	Total	6,016,425	5,529,996	327,440	158,989

Figure F-2. 1990 Massachusetts Population by Age Group

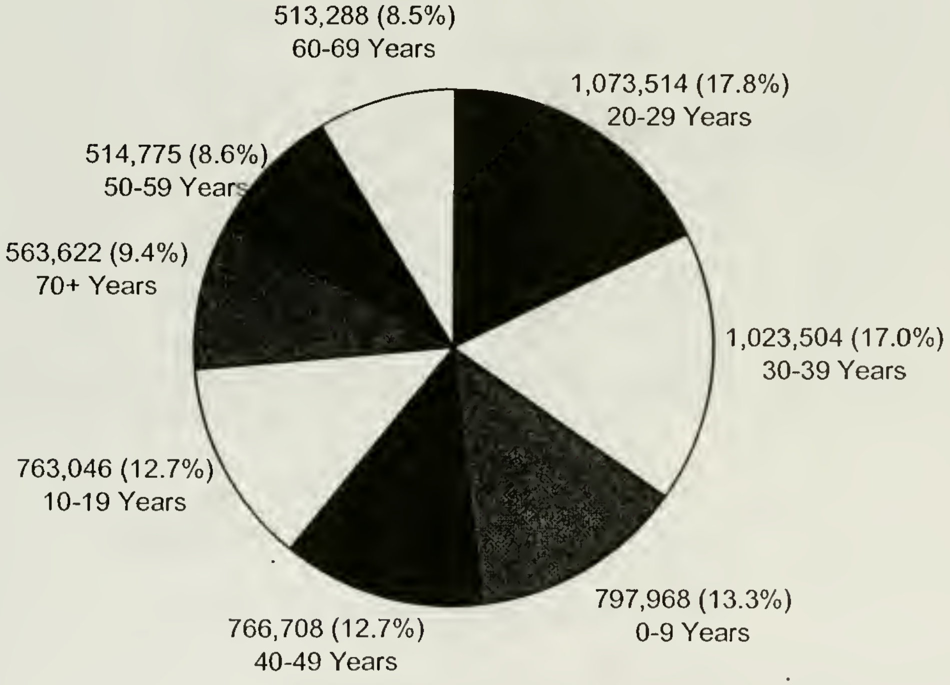
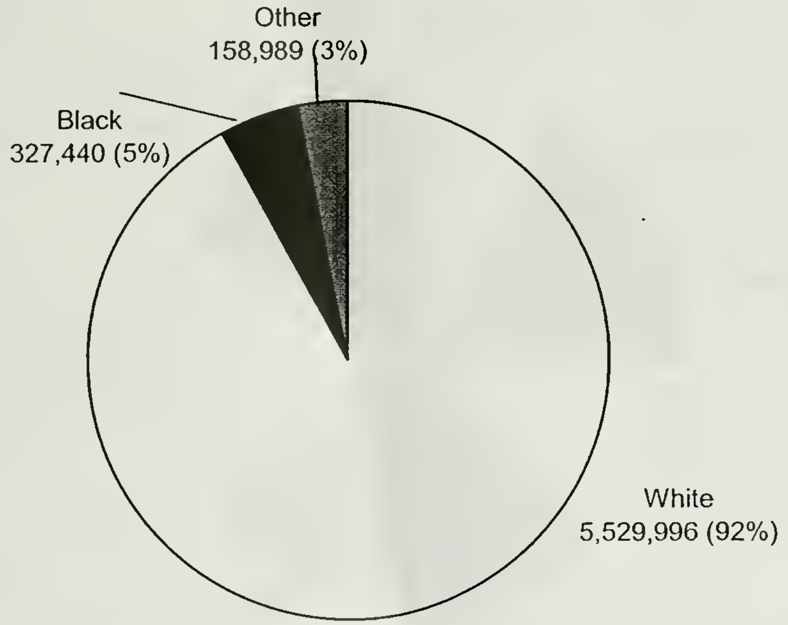


Figure F-3. 1990 Massachusetts Population by Race



[1] Other races include Asian, American Indian, Hawaiian, and others not specified.

Table F-2. Massachusetts Population by County: 1930-1990

	1930	1940	1950	1960	1970	1980	1990
State	4,249,614	4,316,721	4,690,514	5,148,578	5,689,170	5,737,037	6,016,425
Counties							
Barnstable	32,305	37,295	46,805	70,286	96,656	147,925	186,605
Berkshire	120,700	122,273	132,966	142,135	149,402	145,110	139,352
Bristol	364,590	364,637	381,569	398,488	444,301	474,641	506,325
Dukes	4,953	5,669	5,633	5,829	6,117	8,942	11,639
Essex	498,040	496,313	522,384	568,831	637,887	633,632	670,080
Franklin	49,612	49,453	52,747	54,864	59,210	64,317	70,092
Hampden	335,496	332,107	367,971	429,353	459,050	443,018	456,310
Hampshire	72,801	72,461	87,594	103,229	123,981	138,813	146,568
Middlesex	934,924	971,390	1,064,569	1,238,742	1,397,268	1,367,034	1,398,468
Nantucket	3,678	3,401	3,484	3,559	3,774	5,087	6,012
Norfolk	299,426	325,180	392,308	510,256	605,051	606,587	616,087
Plymouth	162,311	168,824	189,468	248,449	333,314	405,437	435,276
Suffolk	879,536	863,248	896,615	791,329	735,190	650,142	663,906
Worcester	491,242	504,470	546,401	583,228	637,969	646,352	709,705

Data taken from the United States Census

Table F-3. Massachusetts Population by City and Town: 1980 and 1990

City/Town	1980 US Census	1990 US Census
ABINGTON	13,517	13,817
ACTON	17,544	17,872
ACUSHNET	8,704	9,554
ADAMS	10,381	9,445
AGAWAM	26,271	27,323
ALFORD	394	418
AMESBURY	13,971	14,997
AMHERST	33,229	35,228
ANDOVER	26,370	29,151
ARLINGTON	48,219	44,630
ASHBURNHAM	4,075	5,433
ASHBY	2,311	2,717
ASHFIELD	1,458	1,715
ASHLAND	9,165	12,066
ATHOL	10,634	11,451
ATTLEBORO	34,196	38,383
AUBURN	14,845	15,005
AVON	5,026	4,558
AYER	6,993	6,871
BARNSTABLE	30,898	40,949
BARRE	4,102	4,546
BECKET	1,339	1,481
BEDFORD	13,067	12,996
BELCHERTOWN	8,339	10,579
BELLINGHAM	14,300	14,877
BELMONT	26,100	24,720
BERKLEY	2,731	4,237
BERLIN	2,215	2,293
BERNARDSTON	1,750	2,048
BEVERLY	37,655	38,195
BILLERICA	36,727	37,609
BLACKSTONE	6,570	8,023
BLANDFORD	1,038	1,187
BOLTON	2,530	3,134
BOSTON	562,994	574,283
BOURNE	13,874	16,064
BOXBOROUGH	3,126	3,343
BOXFORD	5,374	6,266
BOYLSTON	3,470	3,517
BRAINTREE	36,337	33,836
BREWSTER	5,226	8,440
BRIDGEWATER	17,202	21,249
BRIMFIELD	2,318	3,001
BROCKTON	95,172	92,788
BROOKFIELD	2,397	2,968
BROOKLINE	55,062	54,718
BUCKLAND	1,864	1,928
BURLINGTON	23,486	23,302
CAMBRIDGE	95,322	95,802
CANTON	18,182	18,530
CARLISLE	3,306	4,333
CARVER	6,988	10,590
CHARLEMONT	1,149	1,249
CHARLTON	6,719	9,576
CHATHAM	6,071	6,579
CHELMSFORD	31,174	32,383
CHELSEA	25,431	28,710
CHESHIRE	3,124	3,479
CHESTER	1,123	1,280
CHESTERFIELD	1,000	1,048
CHICOPEE	55,112	56,632
CHILMARK	489	650
CLARKSBURG	1,871	1,745
CLINTON	12,771	13,222
COHASSET	7,174	7,075
COLRAIN	1,552	1,757
CONCORD	16,293	17,076
CONWAY	1,213	1,529
CUMMINGTON	657	785
DALTON	6,797	7,155
DANVERS	24,100	24,174
DARTMOUTH	23,966	27,244
DEDHAM	25,298	23,782
DEERFIELD	4,517	5,018
DENNIS	12,360	13,864
DIGHTON	5,352	5,631
DOUGLAS	3,730	5,438
DOVER	4,703	4,915
DRACUT	21,249	25,594
DUDLEY	8,717	9,540
DUNSTABLE	1,671	2,236
DUXBURY	11,807	13,895
EAST BRIDGEWATER	9,945	11,104
EAST BROOKFIELD	1,955	2,033
EAST LONGMEADOW	12,905	13,367
EASTHAM	3,472	4,462
EASTHAMPTON	15,580	15,537
EASTON	16,623	19,807
EDGARTOWN	2,204	3,062
EGREMONT	1,311	1,229
ERVING	1,326	1,372
ESSEX	2,998	3,260
EVERETT	37,195	35,701
FAIRHAVEN	15,759	16,132
FALL RIVER	92,574	92,703
FALMOUTH	23,640	27,960
FITCHBURG	39,580	41,194
FLORIDA	730	742

Table F-3. Massachusetts Population by City and Town: 1980 and 1990

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
FOXBOROUGH	14,148	14,637	LANESBOROUGH	3,131	3,032
FRAMINGHAM	65,113	64,989	LAWRENCE	63,175	70,207
FRANKLIN	18,217	22,095	LEE	6,247	5,849
FREETOWN	7,058	8,522	LEICESTER	9,446	10,191
GARDNER	17,900	20,125	LENOX	6,523	5,069
GAY HEAD	220	201	LEOMINSTER	34,508	38,145
GEORGETOWN	5,687	6,384	LEVERETT	1,471	1,785
GILL	1,259	1,583	LEXINGTON	29,479	28,974
GLOUCESTER	27,768	28,716	LEYDEN	498	662
GOSHEN	651	830	LINCOLN	7,098	7,666
GOSNOLD	63	98	LITTLETON	6,970	7,051
GRAFTON	11,238	13,035	LONGMEADOW	16,301	15,467
GRANBY	5,380	5,565	LOWELL	92,418	103,439
GRANVILLE	1,204	1,403	LUDLOW	18,150	18,820
GREAT BARRINGTON	7,405	7,725	LUNENBURG	8,405	9,117
GREENFIELD	18,436	18,666	LYNN	78,471	81,245
GROTON	6,154	7,511	LYNNFIELD	11,267	11,274
GROVELAND	5,040	5,214	MALDEN	53,386	53,884
HADLEY	4,125	4,231	MANCHESTER	5,424	5,286
HALIFAX	5,513	6,526	MANSFIELD	13,453	16,568
HAMILTON	6,960	7,280	MARBLEHEAD	20,126	19,971
HAMPDEN	4,745	4,709	MARION	3,932	4,496
HANCOCK	643	628	MARLBOROUGH	30,617	31,813
HANOVER	11,358	11,912	MARSHFIELD	20,916	21,531
HANSON	8,617	9,028	MASHPEE	3,700	7,884
HARDWICK	2,272	2,385	MATTAPOISETT	5,597	5,850
HARVARD	12,170	12,329	MAYNARD	9,590	10,325
HARWICH	8,971	10,275	MEDFIELD	10,220	10,531
HATFIELD	3,045	3,184	MEDFORD	58,076	57,407
HAVERHILL	46,865	51,418	MEDWAY	8,447	9,931
HAWLEY	280	317	MELROSE	30,055	28,150
HEATH	482	716	MENDON	3,108	4,010
HINGHAM	20,339	19,821	MERRIMAC	4,451	5,166
HINSDALE	1,707	1,959	METHUEN	36,701	39,990
HOLBROOK	11,140	11,041	MIDDLEBOROUGH	16,404	17,867
HOLDEN	13,336	14,628	MIDDLEFIELD	385	392
HOLLAND	1,589	2,185	MIDDLETON	4,135	4,921
HOLLISTON	12,622	12,926	MILFORD	23,390	25,355
HOLYOKE	44,678	43,704	MILLBURY	11,808	12,228
HOPEDALE	3,905	5,666	MILLIS	6,908	7,613
HOPKINTON	7,114	9,191	MILLVILLE	1,693	2,236
HUBBARDSTON	1,797	2,797	MILTON	25,860	25,725
HUDSON	16,408	17,233	MONROE	179	115
HULL	9,714	10,466	MONSON	7,315	7,776
HUNTINGTON	1,804	1,987	MONTAGUE	8,011	8,316
IPSWICH	11,158	11,873	MONTEREY	818	805
KINGSTON	7,362	9,045	MONTGOMERY	637	759
LAKEVILLE	5,931	7,785	MOUNT WASHINGTON	93	135
LANCASTER	6,334	6,661	NAHANT	3,947	3,828

Table F-3. Massachusetts Population by City and Town: 1980 and 1990

City/Town	1980 US Census	1990 US Census	City/Town	1980 US Census	1990 US Census
NANTUCKET	5,087	6,012	READING	22,678	22,539
NATICK	29,461	30,510	REHOBOTH	7,570	8,656
NEEDHAM	27,901	27,557	REVERE	42,423	42,786
NEW ASHFORD	159	192	RICHMOND	1,659	1,677
NEW BEDFORD	98,478	99,922	ROCHESTER	3,205	3,921
NEW BRAINTREE	671	881	ROCKLAND	15,695	16,123
NEW MARLBOROUGH	1,160	1,240	ROCKPORT	6,345	7,482
NEW SALEM	688	802	ROWE	336	378
NEWBURY	4,529	5,623	ROWLEY	3,867	4,452
NEWBURYPORT	15,900	16,317	ROYALSTON	955	1,147
NEWTON	83,622	82,585	RUSSELL	1,570	1,594
NORFOLK	6,363	9,270	RUTLAND	4,334	4,936
NORTH ADAMS	18,063	16,797	SALEM	38,220	38,091
NORTH ANDOVER	20,129	22,792	SALISBURY	5,973	6,882
NORTH ATTLEBORO	21,095	25,038	SANDISFIELD	720	667
NORTH BROOKFIELD	4,150	4,708	SANDWICH	8,727	15,489
NORTH READING	11,455	12,002	SAUGUS	24,746	25,549
NORTHAMPTON	29,286	29,289	SAVOY	644	634
NORTHBOROUGH	10,568	11,929	SCITUATE	17,317	16,786
NORTHBRIDGE	12,246	13,371	SEEKONK	12,269	13,046
NORTHFIELD	2,386	2,838	SHARON	13,601	15,517
NORTON	12,690	14,265	SHEFFIELD	2,743	2,910
NORWELL	9,182	9,279	SHELBURNE	2,002	2,012
NORWOOD	29,711	28,700	SHERBORN	4,049	3,989
OAK BLUFFS	1,984	2,804	SHIRLEY	5,124	6,118
OAKHAM	994	1,503	SHREWSBURY	22,674	24,146
ORANGE	6,844	7,312	SHUTESBURY	1,049	1,561
ORLEANS	5,306	5,838	SOMERSET	18,813	17,655
OTIS	963	1,073	SOMERVILLE	77,372	76,210
OXFORD	11,680	12,588	SOUTH HADLEY	16,399	16,685
PALMER	11,389	12,054	SOUTHAMPTON	4,137	4,478
PAXTON	3,762	4,047	SOUTHBOROUGH	6,193	6,628
PEABODY	45,976	47,039	SOUTHBRIDGE	16,665	17,816
PELHAM	1,112	1,373	SOUTHWICK	7,382	7,667
PEMBROKE	13,487	14,544	SPENCER	10,774	11,645
PEPPERELL	8,061	10,098	SPRINGFIELD	152,319	156,983
PERU	633	779	STERLING	5,440	6,481
PETERSHAM	1,024	1,131	STOCKBRIDGE	2,328	2,408
PHILLIPSTON	953	1,485	STONEHAM	21,424	22,203
PITTSFIELD	51,974	48,622	STOUGHTON	26,710	26,777
PLAINFIELD	425	571	STOW	5,144	5,328
PLAINVILLE	5,857	6,871	STURBRIDGE	5,976	7,775
PLYMOUTH	35,913	45,608	SUDBURY	14,027	14,358
PLYMPTON	1,974	2,384	SUNDERLAND	2,929	3,399
PRINCETON	2,425	3,189	SUTTON	5,855	6,824
PROVINCETOWN	3,536	3,561	SWAMPSCOTT	13,837	13,650
QUINCY	84,743	84,985	SWANSEA	15,461	15,411
RANDOLPH	28,218	30,093	TAUNTON	45,001	49,832
RAYNHAM	9,085	9,867	TEMPLETON	6,070	6,438

Table F-3. Massachusetts Population by City and Town: 1980 and 1990

City/Town	1980 US Census	1990 US Census
TEWKSBURY	24,635	27,266
TISBURY	2,972	3,120
TOLLAND	235	289
TOPSFIELD	5,709	5,754
TOWNSEND	7,201	8,496
TRURO	1,486	1,573
TYNGSBOROUGH	5,683	8,642
TYRINGHAM	344	369
UPTON	3,886	4,677
UXBRIDGE	8,374	10,415
WAKEFIELD	24,895	24,825
WALES	1,177	1,566
WALPOLE	18,859	20,212
WALTHAM	58,200	57,878
WARE	8,953	9,808
WAREHAM	18,457	19,232
WARREN	3,777	4,437
WARWICK	603	740
WASHINGTON	587	615
WATERTOWN	34,384	33,284
WAYLAND	12,170	11,874
WEBSTER	14,480	16,196
WELLESLEY	27,209	26,615
WELLFLEET	2,209	2,493
WENDELL	694	899
WENHAM	3,897	4,212
WEST BOYLSTON	6,204	6,611
WEST BRIDGEWATER	6,359	6,389
WEST BROOKFIELD	3,026	3,532
WEST NEWBURY	2,861	3,421
WEST SPRINGFIELD	27,042	27,537
WEST STOCKBRIDGE	1,280	1,483
WEST TISBURY	1,010	1,704
WESTBOROUGH	13,619	14,133
WESTFIELD	36,465	38,372
WESTFORD	13,434	16,392
WESTHAMPTON	1,137	1,327
WESTMINSTER	5,139	6,191
WESTON	11,169	10,200
WESTPORT	13,763	13,852
WESTWOOD	13,212	12,557
WEYMOUTH	55,601	54,063
WHATELY	1,341	1,375
WHITMAN	13,534	13,240
WILBRAHAM	12,053	12,635
WILLIAMSBURG	2,237	2,515
WILLIAMSTOWN	8,741	8,220
WILMINGTON	17,471	17,651
WINCHENDON	7,019	8,805
WINCHESTER	20,701	20,267
WINDSOR	598	770
WINTHROP	19,294	18,127
WOBURN	36,626	35,943
WORCESTER	161,799	169,759
WORTHINGTON	932	1,156
WRENTHAM	7,580	9,006
YARMOUTH	18,449	21,174
Statewide Totals	5,737,037	6,016,425

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
0 - 4	1980	337,215	173,029	164,186
	1985	379,282	194,237	185,045
	1986	387,696	198,479	189,217
	1987	396,109	202,720	193,389
	1988	404,522	206,962	197,560
	1989	412,935	211,203	201,732
	1990	421,349	215,445	205,904
	1991	424,617	217,179	207,438
	1992	425,142	217,537	207,605
	1993	424,647	217,471	207,176
	1994	421,986	216,493	205,493
	1995	415,741	213,448	202,293
	1996	409,660	210,345	199,315
	1997	404,223	207,394	196,829
	1998	399,860	204,983	194,877
5 - 9	1980	374,734	191,602	183,132
	1985	375,677	192,542	183,135
	1986	375,865	192,730	183,135
	1987	376,054	192,918	183,136
	1988	376,242	193,106	183,136
	1989	376,431	193,294	183,137
	1990	376,619	193,482	183,137
	1991	384,465	197,306	187,159
	1992	388,956	199,564	189,392
	1993	392,430	201,241	191,189
	1994	399,236	204,404	194,832
	1995	404,660	206,980	197,680
	1996	410,066	209,813	200,253
	1997	414,757	212,313	202,444
	1998	414,810	212,483	202,327
10 - 14	1980	461,332	235,669	225,663
	1985	404,174	206,784	197,390
	1986	392,742	201,007	191,735
	1987	381,311	195,230	186,081
	1988	369,879	189,453	180,426
	1989	358,448	183,676	174,772
	1990	347,016	177,899	169,117
	1991	355,502	182,288	173,214
	1992	358,775	184,070	174,705
	1993	363,655	186,671	176,984
	1994	368,790	189,353	179,437
	1995	372,452	191,298	181,154
	1996	380,540	195,292	185,248
	1997	388,421	199,263	189,158
	1998	391,860	200,941	190,919

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
15-19	1980	548,239	274,859	273,380
	1985	482,135	242,074	240,061
	1986	468,914	235,517	233,397
	1987	455,693	228,960	226,733
	1988	442,472	222,403	220,069
	1989	429,251	215,846	213,405
	1990	416,030	209,289	206,741
	1991	391,939	197,402	194,537
	1992	383,111	192,951	190,160
	1993	383,138	192,863	190,275
	1994	389,017	195,597	193,420
	1995	397,926	200,053	197,873
	1996	407,088	204,859	202,229
	1997	410,740	207,139	203,601
	1998	418,488	211,026	207,452
20-24	1980	552,902	270,713	282,189
	1985	535,048	263,685	271,363
	1986	531,477	262,279	269,198
	1987	527,907	260,874	267,033
	1988	524,335	259,468	264,867
	1989	520,765	258,063	262,702
	1990	517,194	256,657	260,537
	1991	514,576	255,360	259,216
	1992	516,059	256,092	259,967
	1993	508,509	252,385	256,124
	1994	497,732	247,056	250,676
	1995	486,412	241,442	244,970
	1996	469,010	232,807	236,203
	1997	463,895	230,140	233,755
	1998	465,352	230,886	234,466
25-29	1980	489,175	239,341	249,834
	1985	522,748	258,318	264,430
	1986	529,462	262,113	267,349
	1987	536,177	265,909	270,268
	1988	542,891	269,704	273,187
	1989	549,606	273,500	276,106
	1990	556,320	277,295	279,025
	1991	540,234	268,978	271,256
	1992	529,711	263,810	265,901
	1993	518,304	258,294	260,010
	1994	512,557	255,973	256,584
	1995	510,664	255,351	255,313
	1996	514,088	257,258	256,830
	1997	511,765	256,137	255,628
	1998	502,345	251,390	250,955

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
30-34	1980	446,395	217,649	228,746
	1985	494,363	243,175	251,188
	1986	503,956	248,280	255,676
	1987	513,549	253,385	260,164
	1988	523,143	258,491	264,652
	1989	532,737	263,596	269,141
	1990	542,330	268,701	273,629
	1991	547,724	272,103	275,621
	1992	543,398	270,256	273,142
	1993	539,945	268,647	271,298
	1994	537,869	267,675	270,194
	1995	529,735	263,782	265,953
	1996	518,478	258,141	260,337
	1997	512,473	255,510	256,963
	1998	502,992	251,066	251,926
35-39	1980	348,552	169,502	179,050
	1985	414,863	203,352	211,511
	1986	428,125	210,122	218,003
	1987	441,387	216,892	224,495
	1988	454,650	223,662	230,988
	1989	467,912	230,432	237,480
	1990	481,174	237,202	243,972
	1991	492,003	242,601	249,402
	1992	501,299	247,290	254,009
	1993	508,723	251,039	257,684
	1994	517,102	255,251	261,851
	1995	522,467	258,017	264,450
	1996	527,036	260,758	266,278
	1997	525,899	260,595	265,304
	1998	522,796	259,389	263,407
40-44	1980	278,748	134,925	143,823
	1985	356,061	173,162	182,899
	1986	371,523	180,809	190,714
	1987	386,986	188,457	198,529
	1988	402,449	196,104	206,345
	1989	417,912	203,752	214,160
	1990	433,374	211,399	221,975
	1991	452,459	221,123	231,336
	1992	448,133	219,257	228,876
	1993	450,944	220,919	230,025
	1994	458,221	224,614	233,607
	1995	466,848	229,037	237,811
	1996	477,644	234,298	243,346
	1997	489,729	240,396	249,333
	1998	496,569	243,966	252,603

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
45-49	1980	278,261	134,444	143,817
	1985	305,798	148,540	157,258
	1986	311,305	151,359	159,946
	1987	316,812	154,178	162,634
	1988	322,320	156,998	165,322
	1989	327,827	159,817	168,010
	1990	333,334	162,636	170,698
	1991	347,758	169,614	178,144
	1992	372,449	181,639	190,810
	1993	388,267	189,222	199,045
	1994	405,627	197,458	208,169
	1995	424,194	206,334	217,860
	1996	440,676	214,576	226,100
	1997	439,700	214,255	225,445
	1998	442,352	215,783	226,569
50-54	1980	306,574	146,211	160,363
	1985	284,588	136,396	148,192
	1986	280,190	134,433	145,757
	1987	275,793	132,470	143,323
	1988	271,396	130,507	140,889
	1989	266,998	128,544	138,454
	1990	262,601	126,581	136,020
	1991	266,799	128,835	137,964
	1992	274,537	132,602	141,935
	1993	291,124	140,790	150,334
	1994	305,629	148,204	157,425
	1995	317,854	154,500	163,354
	1996	331,747	161,214	170,533
	1997	359,036	174,461	184,575
	1998	376,308	182,775	193,533
55-59	1980	310,995	145,603	165,392
	1985	281,585	132,889	148,696
	1986	275,702	130,346	145,356
	1987	269,820	127,803	142,017
	1988	263,939	125,261	138,678
	1989	258,056	122,718	135,338
	1990	252,174	120,175	131,999
	1991	243,598	116,332	127,266
	1992	239,741	114,800	124,941
	1993	238,223	114,215	124,008
	1994	240,256	115,150	125,106
	1995	243,035	116,491	126,544
	1996	248,445	119,247	129,198
	1997	258,444	124,059	134,385
	1998	275,482	132,476	143,006

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
60-64	1980	277,384	126,323	151,061
	1985	269,645	123,966	145,679
	1986	268,097	123,495	144,602
	1987	266,549	123,023	143,526
	1988	265,001	122,552	142,449
	1989	263,453	122,080	141,373
	1990	261,905	121,609	140,296
	1991	252,853	117,797	135,056
	1992	243,758	113,682	130,076
	1993	236,302	110,383	125,919
	1994	229,887	107,716	122,171
	1995	225,426	105,979	119,447
	1996	221,450	104,381	117,069
	1997	220,318	104,206	116,112
	1998	220,073	104,333	115,740
65-69	1980	235,574	101,023	134,551
	1985	243,479	105,724	137,755
	1986	245,060	106,664	138,396
	1987	246,641	107,604	139,037
	1988	248,221	108,544	139,677
	1989	249,802	109,484	140,318
	1990	251,383	110,424	140,959
	1991	242,200	107,138	135,062
	1992	239,439	106,603	132,836
	1993	236,419	106,028	130,391
	1994	233,259	105,261	127,998
	1995	229,328	103,887	125,441
	1996	226,174	102,090	124,084
	1997	220,342	99,675	120,667
	1998	224,578	102,051	122,527
70-74	1980	187,041	73,235	113,806
	1985	197,186	79,388	117,798
	1986	199,215	80,619	118,596
	1987	201,244	81,849	119,395
	1988	203,273	83,080	120,193
	1989	205,302	84,310	120,992
	1990	207,331	85,541	121,790
	1991	206,064	85,541	120,523
	1992	207,286	86,411	120,875
	1993	207,610	86,774	120,836
	1994	209,543	88,009	121,534
	1995	211,201	89,345	121,856
	1996	210,014	88,742	121,272
	1997	209,512	89,113	120,399
	1998	217,425	93,318	124,107

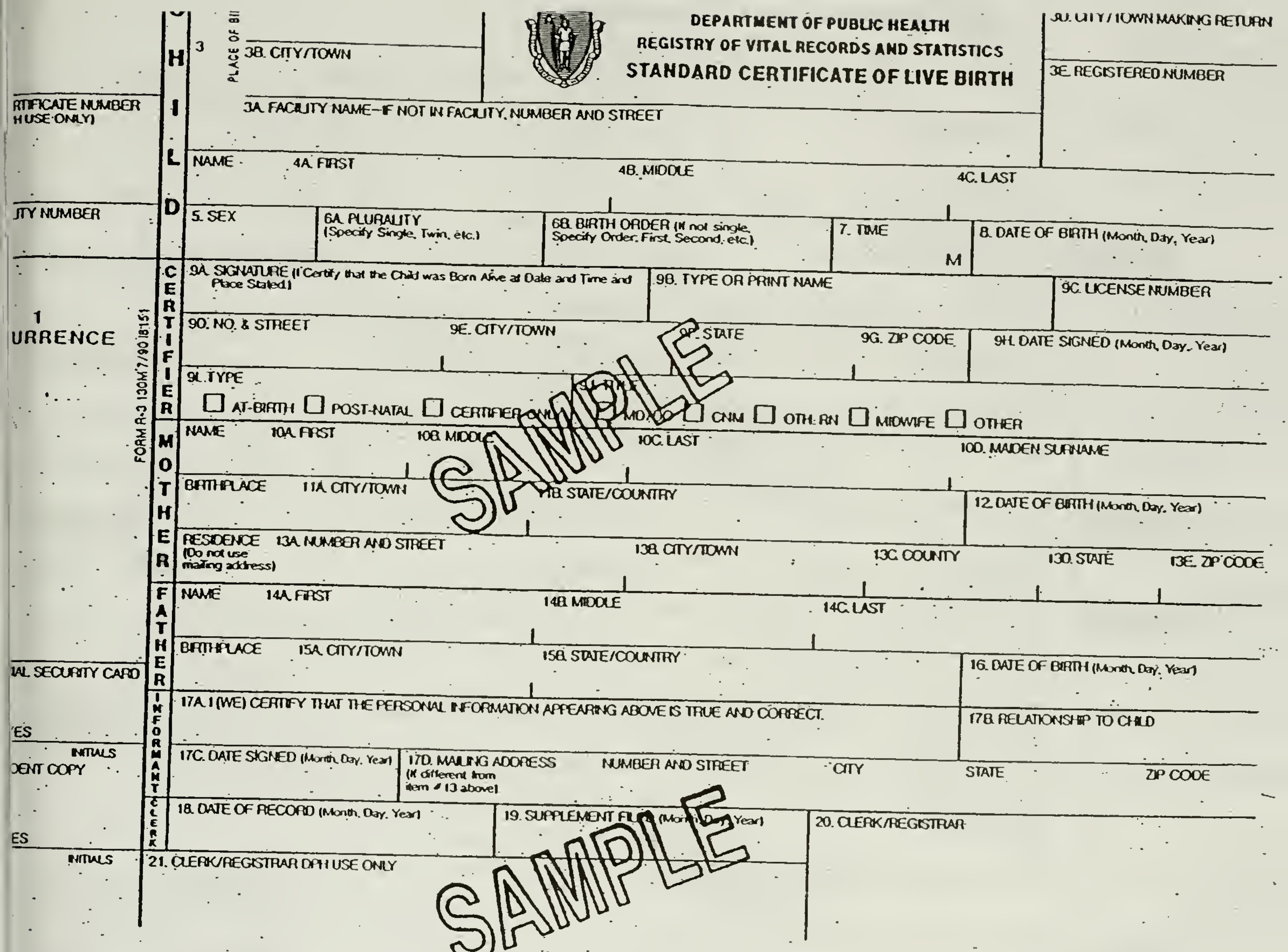
Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
75-79	1980	137,828	48,145	89,683
	1985	148,741	53,591	95,150
	1986	150,923	54,680	96,243
	1987	153,105	55,769	97,336
	1988	155,298	56,869	98,429
	1989	157,471	57,948	99,523
	1990	159,653	59,037	100,616
	1991	157,534	59,176	98,358
	1992	157,819	59,824	97,995
	1993	158,987	60,752	98,235
	1994	161,268	62,072	99,196
	1995	162,986	63,262	99,724
	1996	166,496	64,548	101,948
	1997	169,323	66,029	103,294
	1998	178,254	69,719	108,535
80-84	1980	92,180	28,513	63,667
	1985	99,240	30,991	68,249
	1986	100,651	31,486	69,165
	1987	102,064	31,982	70,082
	1988	103,475	32,477	70,998
	1989	104,888	32,973	71,915
	1990	106,299	33,468	72,831
	1991	106,558	33,989	72,569
	1992	108,271	34,969	73,302
	1993	109,369	35,782	73,587
	1994	110,817	36,721	74,096
	1995	112,913	37,919	74,994
	1996	114,039	38,664	75,375
	1997	114,787	39,273	75,514
	1998	121,228	41,932	79,296
85+	1980	73,908	20,107	53,801
	1985	82,124	21,006	61,118
	1986	83,767	21,186	62,581
	1987	85,410	21,366	64,044
	1988	87,052	21,545	65,507
	1989	88,696	21,725	66,971
	1990	90,339	21,905	68,434
	1991	91,218	22,231	68,987
	1992	99,184	24,479	74,705
	1993	106,943	26,789	80,154
	1994	107,996	27,258	80,738
	1995	108,970	27,600	81,370
	1996	111,703	28,439	83,264
	1997	114,258	29,558	84,700
	1998	120,501	31,447	89,054

Table F-4. Population Counts and Estimates, Massachusetts: 1980, 1985-1998

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
TOTAL	1980	5,737,037	2,730,893	3,006,144
	1985	5,876,737	2,809,820	3,066,917
	1986	5,904,670	2,825,604	3,079,066
	1987	5,932,611	2,841,389	3,091,222
	1988	5,960,548	2,857,176	3,103,372
	1989	5,988,490	2,872,961	3,115,529
	1990	6,016,425	2,888,745	3,127,680
	1991	6,018,101	2,894,993	3,123,108
	1992	6,037,068	2,905,836	3,131,232
	1993	6,063,539	2,920,265	3,143,274
	1994	6,106,792	2,944,265	3,162,527
	1995	6,142,812	2,964,725	3,178,087
	1996	6,184,354	2,985,472	3,198,882
	1997	6,227,622	3,009,516	3,218,106
	1998	6,291,263	3,039,964	3,251,299

APPENDICES



RTIFICATE NUMBER
H USE ONLY)

ITY NUMBER

1
URRENCE

IAL SECURITY CARD

ES

INITIALS
DENT COPY

ES

INITIALS

FORM R-3 130M 7/90 18151

CHILD

3 PLACE OF BI

3B. CITY/TOWN

DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS
STANDARD CERTIFICATE OF LIVE BIRTH

3D. CITY/TOWN MAKING RETURN

3E. REGISTERED NUMBER

3A. FACILITY NAME—IF NOT IN FACILITY, NUMBER AND STREET

NAME 4A. FIRST 4B. MIDDLE 4C. LAST

5. SEX

6A. PLURALITY (Specify Single, Twin, etc.)

6B. BIRTH ORDER (If not single, Specify Order: First, Second, etc.)

7. TIME M

8. DATE OF BIRTH (Month, Day, Year)

CERTIFIER

9A. SIGNATURE (I Certify that the Child was Born Alive at Date and Time and Place Stated.)

9B. TYPE OR PRINT NAME

9C. LICENSE NUMBER

9D. NO. & STREET 9E. CITY/TOWN 9F. STATE 9G. ZIP CODE

9H. DATE SIGNED (Month, Day, Year)

9I. TYPE

☐ AT-BIRTH ☐ POST-NATAL ☐ CERTIFIER ONLY

9J. TITLE

☐ MD/DO ☐ CNM ☐ OTH. RN ☐ MIDWIFE ☐ OTHER

MOTHER

NAME 10A. FIRST 10B. MIDDLE 10C. LAST 10D. MAIDEN SURNAME

BIRTHPLACE 11A. CITY/TOWN 11B. STATE/COUNTRY

12. DATE OF BIRTH (Month, Day, Year)

RESIDENCE (Do not use mailing address) 13A. NUMBER AND STREET 13B. CITY/TOWN 13C. COUNTY 13D. STATE 13E. ZIP CODE

FATHER

NAME 14A. FIRST 14B. MIDDLE 14C. LAST

BIRTHPLACE 15A. CITY/TOWN 15B. STATE/COUNTRY

16. DATE OF BIRTH (Month, Day, Year)

INFORMANT

17A. I (WE) CERTIFY THAT THE PERSONAL INFORMATION APPEARING ABOVE IS TRUE AND CORRECT.

17B. RELATIONSHIP TO CHILD

17C. DATE SIGNED (Month, Day, Year)

17D. MAILING ADDRESS (If different from item # 13 above) NUMBER AND STREET CITY STATE ZIP CODE

CLERK

18. DATE OF RECORD (Month, Day, Year)

19. SUPPLEMENT FILED (Month, Day, Year)

20. CLERK/REGISTRAR

21. CLERK/REGISTRAR DPH USE ONLY

SAMPLE

SAMPLE

FOR USE BY
PHYSICIANS AND
MEDICAL EXAMINERS

The Commonwealth of Massachusetts

STANDARD CERTIFICATE OF DEATH
REGISTRY OF VITAL RECORDS AND STATISTICS

REGISTERED NUMBER	STATE USE ONLY

STATE USE ONLY

4a	PLACE
4c	HOSP.
5.	TYPE
7.	VET.
8.	HISP RACE
9.	EDUC.
10.	AGE
11.	NATIVITY
12.	MARITAL
15.	RESID.
15.	OUT-STATE
3.	DISP.
1-32	AUTOP.
1.	MED EXAM
	MANNER
C.	WORK INJ
	PLACE
37	CERT
	RN PRO

DECEDENT

DECEDENT - NAME FIRST MIDDLE LAST 1	SEX 2	DATE OF DEATH (Mo., Day, Yr.) 3	
PLACE OF DEATH (City/Town) 4a	COUNTY OF DEATH 4b	HOSPITAL OR OTHER INSTITUTION - *Name (If not in either, give street and number)* 4c	

PLACE OF DEATH (Check only one): HOSPITAL: ☐ Inpatient ☐ ER/Outpatient ☐ DOA OTHER: ☐ Nursing Home ☐ Residence ☐ Other (Specify) 5	SOCIAL SECURITY NUMBER 6	IF US WAR VETERAN SPECIFY WAR 7
WAS DECEDENT OF HISPANIC ORIGIN? *(If yes, Specify Puerto Rican, Dominican, Cuban, etc.)* ☐ NO ☐ YES 6a Specify:	RACE *(e.g. White, Black, American Indian, etc.)* *(Specify):* 8b	DECEDENT'S EDUCATION (Highest Grade Completed) Elem/Sec (0-12) | College (1-4, 5+) 9

AGE - Last Birthday (Yrs.) 10a	UNDER 1 YEAR MOS b	 DAYS	UNDER 1 DAY HOURS c	 MINS	DATE OF BIRTH (Mo., Day, Yr.) 10d	BIRTHPLACE (City and State or Foreign Country) 11

MARRIED, NEVER MARRIED WIDOWED OR DIVORCED 12	LAST SPOUSE *(If wife, give maiden name)* 13	USUAL OCCUPATION *(Prior - If retired)* 14a	KIND OF BUSINESS OR INDUSTRY 14b
RESIDENCE - NO. & ST., CITY/TOWN, COUNTY, STATE, COUNTY 15a			ZIP CODE 15b
FATHER - FULL NAME 16	STATE OF BIRTH *(If not in US, name country)* 17	MOTHER - NAME (GIVEN) (MAIDEN) 18	STATE OF BIRTH *(If not in US, name country)* 19

INFORMANT

INFORMANT'S NAME 20	MAILING ADDRESS - NO. & ST., CITY/TOWN, STATE, ZIP CODE 21	RELATIONSHIP 22

DISPOSITION

METHOD OF DISPOSITION ☐ BURIAL ☐ CREMATION ☐ ENTOMBMENT ☐ REMOVAL FROM STATE 23 ☐ DONATION ☐ OTH. SPEC:	FUNERAL SERVICE LICENSEE 24	LICENSE # 25
PLACE OF DISPOSITION *(Name of Cemetery, Crematory or other)* 26a		LOCATION *(City/Town, State)* 26b
DATE OF DISPOSITION *(Mo., Day, Yr.)* 27	NAME AND ADDRESS OF FACILITY 28a/b	

29 PART I - Enter the diseases, injuries, or complications that caused the death. Do not use only the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. List only one cause on each line (a through d). PRINT OR TYPE LEGIBLY.

Approximate Interval Between Onset and Death

IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. ______________________

DUE TO (OR AS A CONSEQUENCE OF)

Sequentially list conditions, if any leading to immediate cause. Enter UNDERLYING CAUSE (disease or injury that initiated events resulting in death) LAST.

b. ______________________

DUE TO (OR AS A CONSEQUENCE OF)

c. ______________________

DUE TO (OR AS A CONSEQUENCE OF)

d. ______________________

CERTIFIER

PART II - Other signficiant conditions contributing to death but not resulting in underlying cause given in Part I. 30	WAS AUTOPSY PERFORMED? *(Yes or No)* 31	WERE AUTOPSY FINDING AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? *(Yes or No)* 32

WAS CASE REFERRED TO M.E.? *(Yes or No)* 33	34 MANNER OF DEATH ☐ NATURAL ☐ HOMICIDE ☐ COULD NOT BE DETERMINED ☐ ACCIDENT ☐ SUICIDE ☐ PENDING INVESTIGATION	DATE OF INJURY *(Mo., Day, Yr.)* 35a	TIME OF INJURY 35b M	INJURY AT WO *(Yes or No)* 35c

DESCRIBE HOW INJURY OCCURRED 35d	PLACE OF INJURY - *At home, farm, street, factory, office bldg., etc. Specify:* 35e	LOCATION *(No. & St., City/Town, State)* 35f

To be Completed by CERTIFYING PHYSICIAN Only

36a *To the best of my knowledge, death occurred at the time, date, and place and due to the cause(s) stated* *(Signature and Title)*	
DATE SIGNED *(Mo., Day, Yr.)* 36b	HOUR OF DEATH 36c M
NAME OF ATTENDING PHYSICIAN IF NOT CERTIFIER 36d	

To Be Completed by MEDICAL EXAMINER Only

37a *On the basis of examination and/or investigation in my opinion death occurred at the time, date, and place and due to the cause(s) stated* *(Signature and Title)*	
DATE SIGNED *(Mo., Day, Yr.)* 37b	HOUR OF DEATH 37c
PRONOUNCED DEAD *(Mo., Day, Yr.)* 37d	PRONOUNCED DEAD *(Hr.)* 37e

NAME AND ADDRESS OF CERTIFYING PHYSICIAN OR MEDICAL EXAMINER *(Type or Print)* 38			LICENSE NO. OF CERTIFIER 39
WAS THERE AN R.N. PRONOUNCEMENT? *Yes or No* 40a	IF YES, DATE PRONOUNCED 40b	IF YES, TIME PRONOUNCED 40c M	40d NAME OF PRONOUNCING REGISTERED NURSE NAME

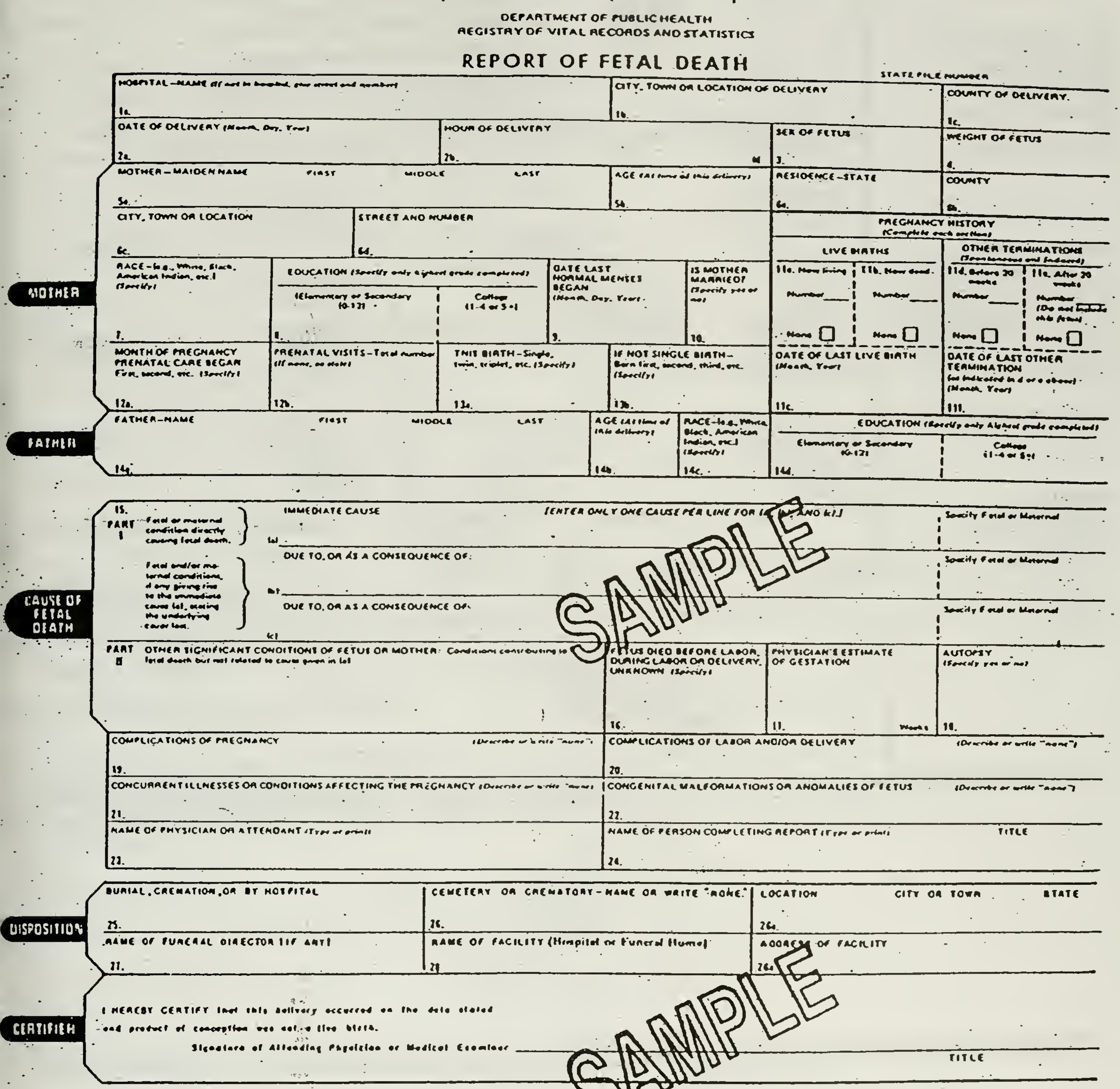
DATE BURIAL PERMIT ISSUED: SIGNATURE - BD. OF HEALTH AGENT 41	RECEIVED IN THE CITY/TOWN OF: CLERK'S SIGNATURE 42	DATE OF RECORD 43

SAMPLE

SAMPLE

BLACK INK ONLY

R-301-89



DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS

REPORT OF FETAL DEATH

STATE FILE NUMBER

HOSPITAL—NAME (If not in hospital, give street and number) 1a.
CITY, TOWN OR LOCATION OF DELIVERY 1b.
COUNTY OF DELIVERY 1c.
DATE OF DELIVERY (Month, Day, Year) 2a.
HOUR OF DELIVERY 2b. M
SEX OF FETUS 3.
WEIGHT OF FETUS 4.

MOTHER

MOTHER—MAIDEN NAME FIRST MIDDLE LAST 5a.
AGE (At time of this delivery) 5b.
RESIDENCE—STATE 6a.
COUNTY 6b.
CITY, TOWN OR LOCATION 6c.
STREET AND NUMBER 6d.
RACE—(e.g., White, Black, American Indian, etc.) (Specify) 7.
EDUCATION (Specify only highest grade completed) (Elementary or Secondary (0-12)) | College (1-4 or 5+) 8.
DATE LAST NORMAL MENSES BEGAN (Month, Day, Year) 9.
IS MOTHER MARRIED? (Specify yes or no) 10.

PREGNANCY HISTORY (Complete each section)

LIVE BIRTHS
11a. Now living Number____ None ☐
11b. Now dead Number____ None ☐
DATE OF LAST LIVE BIRTH (Month, Year) 11c.

OTHER TERMINATIONS (Spontaneous and Induced)
11d. Before 20 weeks Number____ None ☐
11e. After 20 weeks Number (Do not include this fetus) None ☐
DATE OF LAST OTHER TERMINATION (as indicated in d or e above) (Month, Year) 11f.

MONTH OF PREGNANCY PRENATAL CARE BEGAN First, second, etc. (Specify) 12a.
PRENATAL VISITS—Total number (If none, so state) 12b.
THIS BIRTH—Single, twin, triplet, etc. (Specify) 13a.
IF NOT SINGLE BIRTH—Born first, second, third, etc. (Specify) 13b.

FATHER

FATHER—NAME FIRST MIDDLE LAST 14a.
AGE (At time of this delivery) 14b.
RACE—(e.g., White, Black, American Indian, etc.) (Specify) 14c.
EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12) | College (1-4 or 5+) 14d.

CAUSE OF FETAL DEATH

15. PART I

Fetal or maternal condition directly causing fetal death. IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), AND (c).)
(a) ____ Specify Fetal or Maternal

DUE TO, OR AS A CONSEQUENCE OF:
Fetal and/or maternal conditions, if any giving rise to the immediate cause (a), stating the underlying cause last.
(b) ____ Specify Fetal or Maternal

DUE TO, OR AS A CONSEQUENCE OF:
(c) ____ Specify Fetal or Maternal

PART II OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER: Conditions contributing to fetal death but not related to cause given in (a)

FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify) 16.
PHYSICIAN'S ESTIMATE OF GESTATION 17. Weeks
AUTOPSY (Specify yes or no) 18.

COMPLICATIONS OF PREGNANCY (Describe or write "none") 19.
COMPLICATIONS OF LABOR AND/OR DELIVERY (Describe or write "none") 20.
CONCURRENT ILLNESSES OR CONDITIONS AFFECTING THE PREGNANCY (Describe or write "none") 21.
CONGENITAL MALFORMATIONS OR ANOMALIES OF FETUS (Describe or write "none") 22.
NAME OF PHYSICIAN OR ATTENDANT (Type or print) 23.
NAME OF PERSON COMPLETING REPORT (Type or print) TITLE 24.

DISPOSITION

BURIAL, CREMATION, OR BY HOSPITAL 25.
CEMETERY OR CREMATORY—NAME OR WRITE "NONE." 26.
LOCATION CITY OR TOWN STATE 26a.
NAME OF FUNERAL DIRECTOR (IF ANY) 27.
NAME OF FACILITY (Hospital or Funeral Home) 28.
ADDRESS OF FACILITY 26b.

CERTIFIER

I HEREBY CERTIFY that this delivery occurred on the date stated and product of conception was not a live birth.

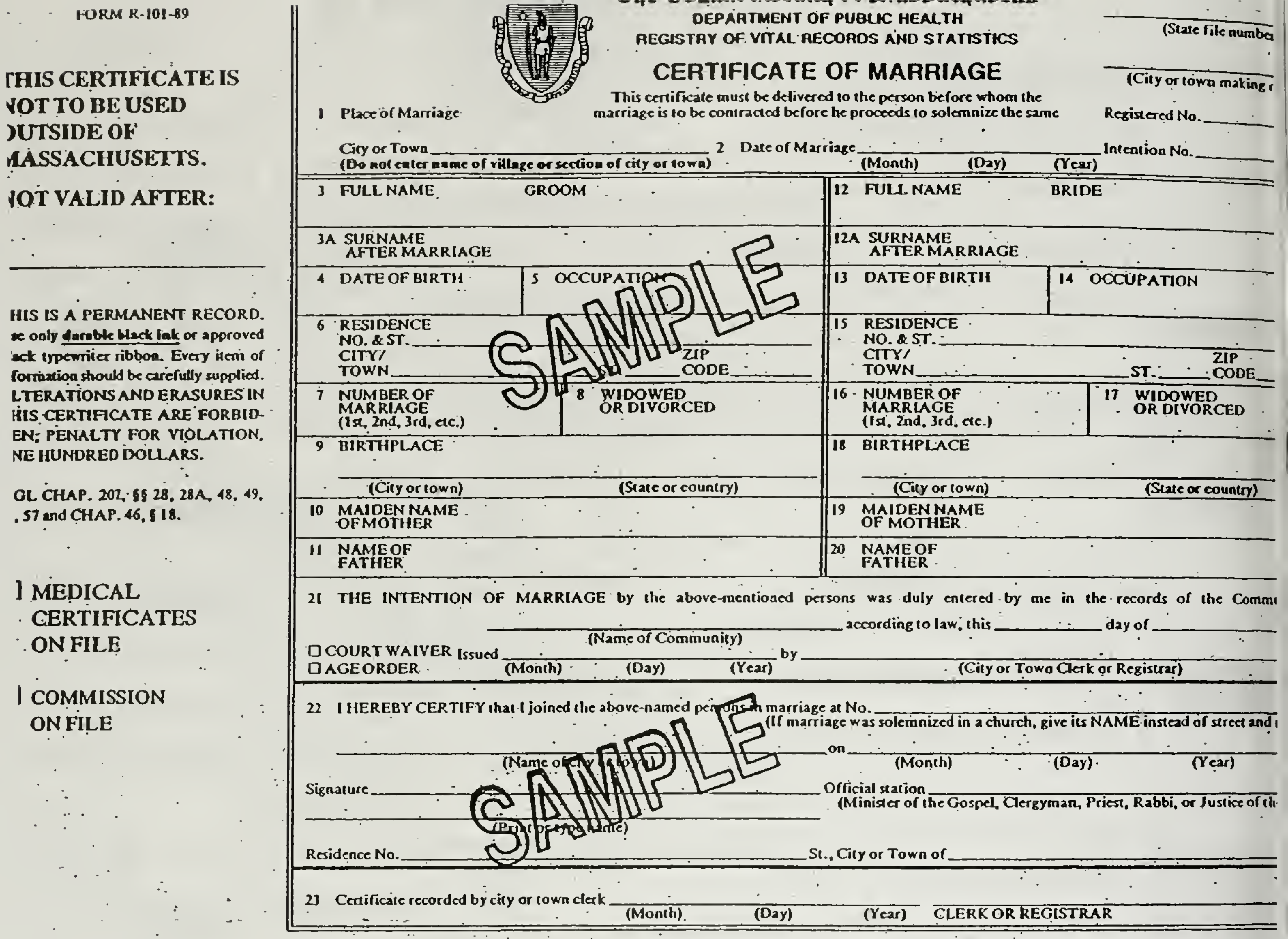
Signature of Attending Physician or Medical Examiner ____ TITLE

SAMPLE

SAMPLE

DEFINITION:	"Fetal death" per chapter 111 section 202 of the M.G.L. means death prior to the complete expulsion or extraction from its mother of a fetus, irrespective of the duration of pregnancy, as indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. A fetal death does NOT include an induced abortion as defined in section 12K of chapter 112 of M.G.L.. Spontaneous abortions are to be included.
TO BE REPORTED:	Only fetal deaths of twenty weeks or more gestation or of a weight of 350 grams or more are to be reported.
INSTRUCTIONS:	Return completed reported within 10 days to the Registry of Vital Records and Statistics, Rm.

FORM R-304-5M 11/77 PHR.



FORM R-101-89

HIS CERTIFICATE IS
OT TO BE USED
UTSIDE OF
ASSACHUSETTS.

OT VALID AFTER:

HIS IS A PERMANENT RECORD. e only durable black ink or approved ack typewriter ribbon. Every item of formation should be carefully supplied. LTERATIONS AND ERASURES IN HIS CERTIFICATE ARE FORBIDDEN; PENALTY FOR VIOLATION, NE HUNDRED DOLLARS.

GL CHAP. 207, §§ 28, 28A, 48, 49, , 57 and CHAP. 46, § 18.

] MEDICAL CERTIFICATES ON FILE

| COMMISSION ON FILE

DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF MARRIAGE

This certificate must be delivered to the person before whom the marriage is to be contracted before he proceeds to solemnize the same

(State file numbe

(City or town making

Registered No. ______

Intention No. ______

1 Place of Marriage
City or Town ______ (Do not enter name of village or section of city or town)
2 Date of Marriage ______ (Month) (Day) (Year)

3 FULL NAME GROOM
3A SURNAME AFTER MARRIAGE
4 DATE OF BIRTH
5 OCCUPATION
6 RESIDENCE NO. & ST. ______ CITY/TOWN ______ ST. ______ ZIP CODE ______
7 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.)
8 WIDOWED OR DIVORCED
9 BIRTHPLACE ______ (City or town) (State or country)
10 MAIDEN NAME OF MOTHER
11 NAME OF FATHER

12 FULL NAME BRIDE
12A SURNAME AFTER MARRIAGE
13 DATE OF BIRTH
14 OCCUPATION
15 RESIDENCE NO. & ST. ______ CITY/TOWN ______ ST. ______ ZIP CODE ______
16 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.)
17 WIDOWED OR DIVORCED
18 BIRTHPLACE ______ (City or town) (State or country)
19 MAIDEN NAME OF MOTHER
20 NAME OF FATHER

SAMPLE

21 THE INTENTION OF MARRIAGE by the above-mentioned persons was duly entered by me in the records of the Comm ______ (Name of Community) according to law, this ______ day of ______

☐ COURT WAIVER Issued ______ (Month) (Day) (Year) by ______ (City or Town Clerk or Registrar)
☐ AGE ORDER

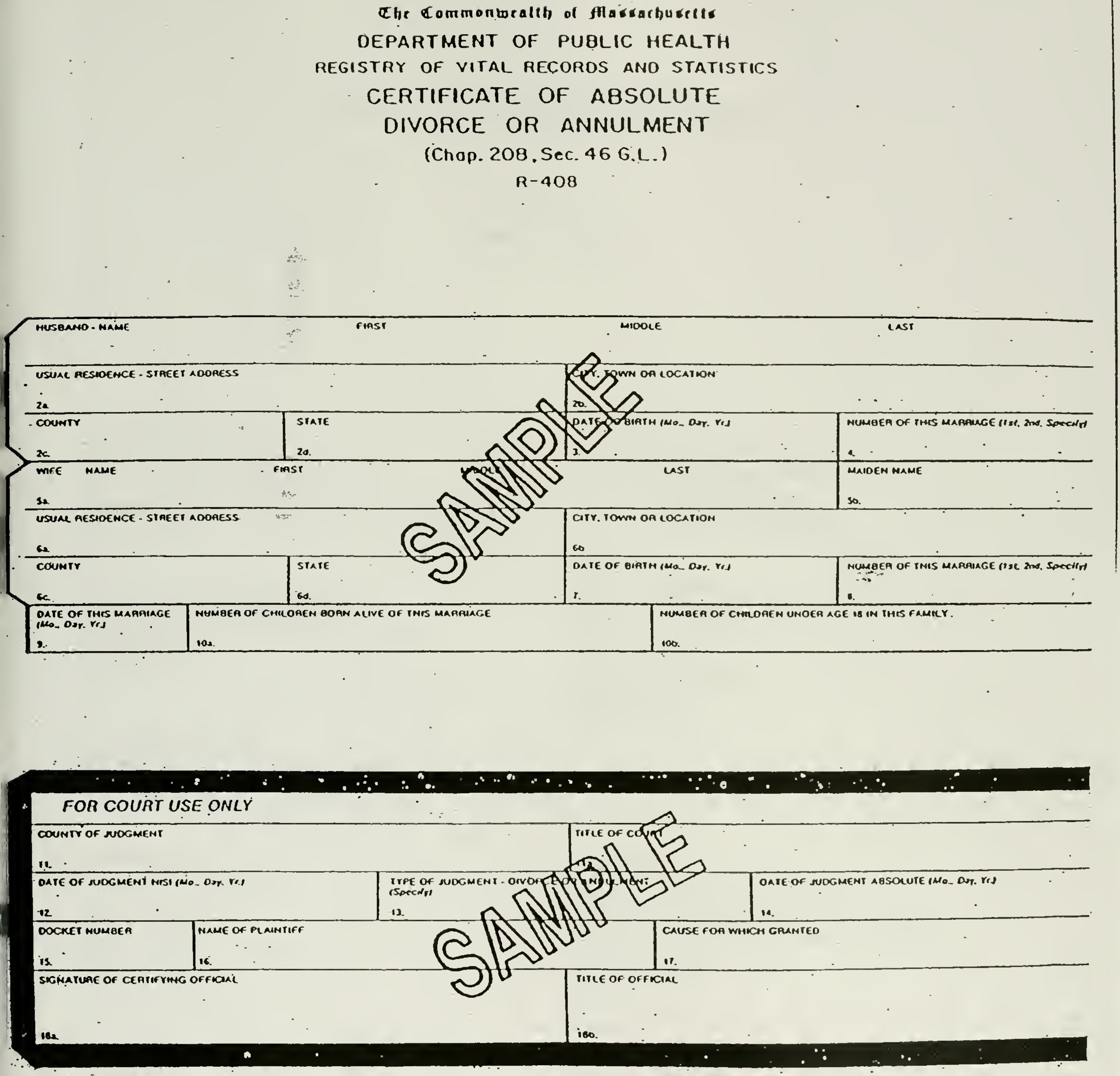
22 I HEREBY CERTIFY that I joined the above-named persons in marriage at No. ______ (If marriage was solemnized in a church, give its NAME instead of street and
______ (Name of city or town) on ______ (Month) (Day) (Year)

Signature ______ Official station ______ (Minister of the Gospel, Clergyman, Priest, Rabbi, or Justice of th
______ (Print or type name)

Residence No. ______ St., City or Town of ______

SAMPLE

23 Certificate recorded by city or town clerk ______ (Month) (Day) (Year) ______ CLERK OR REGISTRAR



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH

REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF ABSOLUTE DIVORCE OR ANNULMENT

(Chap. 208, Sec. 46 G.L.)

R-408

HUSBAND - NAME	FIRST	MIDDLE	LAST
USUAL RESIDENCE - STREET ADDRESS 2a.		CITY, TOWN OR LOCATION 2b.	
COUNTY 2c.	STATE 2d.	DATE OF BIRTH (Mo., Day, Yr.) 3.	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify) 4.
WIFE NAME FIRST 5a.	MIDDLE	LAST	MAIDEN NAME 5b.
USUAL RESIDENCE - STREET ADDRESS 6a.		CITY, TOWN OR LOCATION 6b	
COUNTY 6c.	STATE 6d.	DATE OF BIRTH (Mo., Day, Yr.) 7.	NUMBER OF THIS MARRIAGE (1st, 2nd, Specify) 8.
DATE OF THIS MARRIAGE (Mo., Day, Yr.) 9.	NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE 10a.	NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY. 10b.	

SAMPLE

FOR COURT USE ONLY

COUNTY OF JUDGMENT 11.	TITLE OF COURT 11a.	
DATE OF JUDGMENT NISI (Mo., Day, Yr.) 12.	TYPE OF JUDGMENT - DIVORCE OR ANNULMENT (Specify) 13.	DATE OF JUDGMENT ABSOLUTE (Mo., Day, Yr.) 14.
DOCKET NUMBER 15.	NAME OF PLAINTIFF 16.	CAUSE FOR WHICH GRANTED 17.
SIGNATURE OF CERTIFYING OFFICIAL 18a.	TITLE OF OFFICIAL 18b.	

SAMPLE

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ADMINISTRATION
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Dean L. DiMartino, Director
Ramona A. Irving, Administrative Assistant
Luong Tuyet

INFORMATION TECHNOLOGY
Howard Wong, Director, Systems and Development
Ian Skolnik

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Charlene J. Zion, Information Officer
Kevin Y. Foster, Biostatistician

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